

# TANK AND DRUM SAMPLING REPORT

## SKINNER LANDFILL SITE BUTLER COUNTY WEST CHESTER, OHIO

*Prepared for:*

Skinner Landfill Work Group  
c/o Ben Baker  
2020 Dow Center  
Midland, MI 48764

*Prepared by:*

Earth Tech, Inc.  
200 Vine Street  
Wilder, KY 41076

*July 2001*

*Project Number 38335*

July 9, 2001

Mr. Ben Baker  
The Dow Chemical Company  
Ashman Center  
4520 East Ashman  
Midland, Michigan 48674

Re: Drum and Tank Sampling, Skinner Landfill

Dear Mr. Baker,

Telephone

859-442-2300

Faxsimile

859-442-2311

It is our pleasure to provide you information from the drum and tank sampling at the Skinner Landfill site in West Chester, Ohio. In summary, seven tanks and 110 drums were identified. Of the drums, eight were found to be empty, 17 were found to contain trash or Personal Protective Equipment (PPE), 24 contained liquids of varying amounts, and the remainder were found to contain soils. Most of the 24 drums containing liquids also contained soils.

Three personnel were assigned to this task. The first part of the project was a physical survey of the site to identify and number drums and tanks located inside the fence at the site. The second phase included the construction of a staging area and preparation for sampling. The third phase consisted of opening, characterizing and sampling the drums. The third phase also included field analysis of samples collected in order to characterize and segregate waste streams. The fourth and final phase included final staging of the drums and demobilization from the site.

#### *Phase I*

Personnel conducted a walking survey of the site and labeled all drums and tanks using the format, "SLG-D0##," for drums, and "SLG-T0##," for tanks. Drums were found throughout the site. SLG-T004, the ag tank (a clean 1500 gallon polyethylene storage tank) and the glue tank were sampled. After visual observation, the remaining tanks were not sampled because they appeared to be dry (no liquids observed), were partially or totally buried and were not going to be disturbed.

#### *Phase II*

During this phase of the project, personnel constructed a staging area for the drums. This area was bermed and a six-mil plastic liner was used to cover the ground and create an impermeable surface used to set drums on. All of the drums were considered to be in "poor" condition when compared to U.S. Department of Transportation standards. The staging area was constructed on the top of the landfill near where two large groups of drums had previously been located. The third group of drums relocated to the staging area was found along the west side of the landfill. No labels or other indications of shock sensitive drums were observed.

### *Phase III*

Phase III consisted of the opening and characterization of the drums. This activity was conducted in Level B using supplied air respirators. All PPE and decontamination water from this activity was placed in drums for later disposal. As previously indicated, a total of 110 drums were identified at the site. Except for one drum, all of the liquid containing drums were found to contain less than 1.0 ppm peroxides and had a pH near 7.0. The exception had a pH of 10.0, however the drum did not contain enough liquid to collect a sample for laboratory analysis. Table-2, "Drum Survey Summary," shows the individual results of field analysis. Field analysis indicated chlorinated compounds in six drums.

Samples from the tanks were also collected during this phase. A sample of the discolored liquid from the poly tank ("ag tank") was collected. Sample SLG-T004 was collected from a tank located near the main gate of the site which contained approximately 2.5 to three feet of material. This sample appeared to be thicker in viscosity than diesel fuel (which was what the label on the tank indicated). The third tank sampled ("glue tank") contained a rubbery solid material. This tank also appeared to contain approximately three feet of material.

### *Phase IV*

The final phase of the project consisted of staging the drums of the various waste streams and final decon of equipment and demobilization from the site. The drums were staged into categories of liquid and solids. All sampling equipment was decontaminated with an alconox and water solution followed by a tap water rinse.

### *Data*

Table 1, "Analytical Summary," indicates the parameters which were reported above the method detection limits. In summary, the composite sample of soils which passed all of the field analysis reported no parameters above the method detection limits. The sample, "chlor comp," collected from soils sampled from drums that failed the chlorinated compounds portion of the field analysis reported detection of several chlorinated solvent materials. The liquid composite sample, "liq comp," reported many of the same solvents as well as metals and some semi-volatiles. The "glue tank" and "ag tank" samples reported all parameters below method detection limits. The laboratory analysis of the sample collected from Tank SLG-T004 indicated several semi-volatile compounds above method detection limits. A copy of the laboratory report is included as Attachment 1.

### *Conclusions*

The results of the field analysis indicated the following waste categories: solids, liquids, and chlorinated compounds. Based on laboratory analysis of composite samples taken from each of these groups, the materials that are considered non-hazardous could be incorporated into the landfill. Due to the small total volume of liquid found in the drums, it is recommended that the liquids be consolidated into a single drum for off-site disposal while incorporating the solids into the landfill.

In addition to the above recommendations, Earth Tech recommends that liquids found in tank SLG-T004 be removed by vacuum truck for off-site disposal. Following this removal of liquids, a vessel entry should be made and the tank power washed to remove residual materials prior to recycling of the metal or incorporation of the metal into the landfill. The liquids from the "ag tank" are non-hazardous and can be utilized for dust control within the boundaries of the landfill cap. The glue tank can be opened by the use

of heavy equipment and the tank and materials contained within can be used as fill material within the landfill.

If you have any questions, or if we can be of further assistance, please feel free to contact us at your convenience.

Best regards,



Michael D. Sherron  
Health and Safety Professional

cc: Rick Warwick  
Project Director

attachments

**Table 1**  
**Analytical Summary**

Parameter	Chlorinated Composite	Liquid Composite	Sample Name
Barium	BDL	0.122 ppm (mg/L)	59.6 ppm (mg/kg)
Chromium	BDL	BDL	3.89 ppm (mg/kg)
Lead	BDL	0.017 ppm (mg/L)	86.9 ppm (mg/kg)
1,1,2,2-Tetrachloroethane	0.202 ppm (mg/kg)	BDL	BDL
1,1,2-Trichloroethane	0.155 ppm (mg/kg)	1090 ppb ( $\mu$ g/L)	BDL
1,2,3-Trichloropropane	0.366 ppm (mg/kg)	355 ppb ( $\mu$ g/L)	BDL
1,2-Dichlorobenzene	0.113 ppm (mg/kg)	BDL	BDL
1,2-Dichloroethane	BDL	2290 ppb ( $\mu$ g/L)	BDL
1,2-Dichloropropane	BDL	1320 ppb ( $\mu$ g/L)	BDL
1,3-Dichlorobenzene	0.768 ppm (mg/kg)	BDL	BDL
1,4-Dichlorobenzene	0.566 ppm (mg/kg)	BDL	BDL
2-Methylnaphthalene	NR	BDL	8020 ppm (mg/kg)
Tetrachloroethylene	0.0645 ppm (mg/kg)	BDL	BDL
Acetone	BDL	524 ppb ( $\mu$ g/L)	BDL
Flourene	NR	1160 ppb ( $\mu$ g/L)	BDL
Methylene Chloride	BDL	231 ppb ( $\mu$ g/L)	BDL
Toluene	BDL	1020 ppb ( $\mu$ g/L)	BDL
Trichloroethene	BDL	107 ppb ( $\mu$ g/L)	BDL
Naphthalene	NR	92.2 ppb ( $\mu$ g/L)	3720 ppm (mg/kg)
bis (2-Chloroethyl) ether	NR	469 ppb ( $\mu$ g/L)	BDL
Phenanthrene	NR	BDL	7220 ppm (mg/kg)
Pyrene	NR	BDL	2160 ppm (mg/kg)

BDL = Below Detection Limits

NR = Not Reported

**Table 2**  
**Drum Survey Summary**

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Drum Number	Solid	Liquid	Drum Condition	Air Reactive	Water Soluble	Hexane Soluble	pH	Flammable	Combustible	Oxidizer	Chlorinated Compounds	Existing Label	Peroxides
SLG-D001	Empty		Poor										
SLG-D002	X		Poor	No	No	No	-	No	No	No	No		
		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D003	X		Poor	Hard, concrete like material - unable to sample									
SLG-D004	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D005	X		Poor	No	Sinks	No	-	No	No	No	No		
		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D006	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D007	X		Poor	No	Sinks	No	-	No	No	No	No		
		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D008	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D009	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D010	Empty		Poor										
SLG-D011		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D012	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D013	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D014	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D015	X		Poor	No	Sinks	No	-	No	No	No	No		
		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D016	X		Poor	No	Sinks	No	-	No	No	No	No		
		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D017	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D018	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D019	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D020	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D021	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D022	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D023	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D024	X		Poor	No	Sinks	No	-	No	No	No	No		

Drum Number	Solid	Liquid	Drum Condition	Air Reactive	Water Soluble	Hexane Soluble	pH	Flammable	Combustible	Oxidizer	Chlorinated Compounds	Existing Label	Peroxides
SLG-D025	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D026	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D027		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D028	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D029	X		Poor	No	Sinks	No	-	No	No	No	Yes		
SLG-D030	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D031	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D032	X		Poor	No	Sinks	No	-	No	No	No	No		
		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D033	PPE		Poor										
SLG-D034	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D035	X		Poor	No	Sinks	No	-	No	No	No	Yes		
SLG-D036	PPE		Poor										
SLG-D037	PPE		Poor										PPE
SLG-D038	Trash		Poor										PPE/Trash
SLG-D039	PPE		Poor	No	Sinks	No	-	No	No	No	No		PPE/Trash
SLG-D040	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D041	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D042	PPE		Poor										
SLG-D043	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D044	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D045		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No	-	<1.0
SLG-D046	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D047	Trash		Poor										
SLG-D048	Trash		Poor										
SLG-D049	PPE		Poor										PPE/Trash
SLG-D050	PPE		Poor										PPE/Trash
SLG-D051	Not Sampled, staying in place												

Drum Number	Solid	Liquid	Drum Condition	Air Reactive	Water Soluble	Hexane Soluble	pH	Flammable	Combustible	Oxidizer	Chlorinated Compounds	Existing Label	Peroxides
SLG-D052			Not Sampled, staying in place										
SLG-D053			Not Sampled, staying in place										
SLG-D054			Not Sampled, staying in place										
SLG-D055			Not Sampled, staying in place										
SLG-D056	PPE		Poor										
SLG-D057	PPE		Poor										
SLG-D058	Empty		Poor										
SLG-D059	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D060	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D061	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D062	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D063		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D064	X	Poor	Poor	No	Sinks	No	-	No	No	No	No		
SLG-D065	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D066	X		Poor	No	Sinks	No	-	No	No	No	No		
			Poor										
SLG-D067	X		Poor	No	Sinks	No	-	No	No	No	Yes		
		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D068	PPE		Poor										
SLG-D069	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D070	X		Poor	No	Sinks	No	-	No	No	No	No		
		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D071	Empty		Poor										
SLG-D072	Empty		Poor										
SLG-D073		X	Poor										
		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D074	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D074		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D075	X		Poor	No	Sinks	No	-	No	No	No	No		

Drum Number	Solid	Liquid	Drum Condition	Air Reactive	Water Soluble	Hexane Soluble	pH	Flammable	Combustible	Oxidizer	Chlorinated Compounds	Existing Label	Peroxides
SLG-D076	X		Poor	No	Sinks	No	-	No	No	No	No		
		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D077	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D078	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D079	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D080	Empty		Poor										
SLG-D081	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D082	X		Poor	No	Sinks	No	-	No	No	No	No	Yes	
SLG-D083	Trash		Poor										
SLG-D084	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D085		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D086	Empty		Poor										
SLG-D087	PPE		Poor										
SLG-D088		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D089	X		Poor	No	Sinks	No	-	No	No	No	No		
SLG-D090	X		Poor	No	Sinks	No	-	No	No	No	No		
		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D091		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
SLG-D092	X		Poor	No	Sinks	No	-	No	No	No	No		
D0A01	Empty		Poor										
D0A02	X		Poor	No	Sinks	No	-	No	No	No	No		
D0A03	X		Poor	No	Sinks	No	-	No	No	No	No		
D0A04	X		Poor	No	Sinks	No	-	No	No	No	No		
D0A05	X		Poor	No	Sinks	No	-	No	No	No	No		
D0A06	X		Poor	No	Sinks	No	-	No	No	No	Yes		
		X	Poor	No	Mixed	Separate Phases	7	No	No	No	No		<1.0
D0A07	X		Poor	No	Sinks	No	-	No	No	No	Yes		



**Attachment 1**  
**Laboratory Analytical Report**

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# ANALYTICAL RESULTS

PERFORMED BY

**GULF COAST ANALYTICAL LABORATORIES, INC.**

**REPORT DATE: 06/13/2001**

**GCAL REPORT NO:**  
**20013354**

**DELIVER TO** EARTH TECH, INC.  
200 VINE STREET  
WILDER, KY 41076  
**ATTENTION** MIKE SHERRON  
  
**CLIENT ID** 4360

## SAMPLE CROSS-REFERENCE

### SAMPLE IDENTIFICATION

Sample#	Matrix	Sample ID	Sample Date	Receive Date
2010530031	WATER	LJQ COMP	05/29/2001 15:30	05/30/2001 09:00
2010530032	SOLID	CHLOR COMP	05/29/2001 14:45	05/30/2001 09:00
2010530033	SOLID	SOIL COMP	05/29/2001 15:00	05/30/2001 09:00
2010530034	SOLID	SLG-T004	05/29/2001 11:45	05/30/2001 09:00

**GULF COAST** ANALYTICAL LABORATORIES, INC.

**CASE NARRATIVE**

**Client:** EARTH TECH  
**Date:** 06/13/2001

**Group No:** 20013354

**ORGANIC QUALITY CONTROL CRITERIA:**

**Holding Times:** All holding times were within method criteria.

**Method Blanks:** All method blanks were within quality control criteria.

**Instrument Calibration:** Both the initial and continuing calibrations were within method quality control criteria.

**Surrogate Spikes:** In the Volatile analysis, the surrogate recovery for Bromofluorobenzene was above the control limit in sample 2010530033(SOIL COMP).

In the Semivolatile analysis, one Base-Neutral surrogate was outside of the control limit for sample 2010530031(LIQ COMP).

All other surrogate recoveries were within quality control criteria.

**Matrix Spike/Matrix Spike Duplicate (MS/MSD):** In the Volatile analysis of spike 0W826-197, the recovery for Trichloroethene was outside of the control limit in the MS due to this compound present in the sample; however, all recoveries in the MSD and the %RPD's are acceptable.

In the Volatile analysis is spike 0SM826-063, the LCS was used because the MS/MSD was diluted out due to non-target analytes present in the sample.

In the Volatile analysis of spike 2W826-260, the recovery Trichloroethylene was above the control limit in the MS/MSD; however, all RPD's are acceptable.

In the Semivolatile analysis of spike SVO-282, the laboratory control sample was used because there was matrix interference in the sample.

In the Semivolatile analysis of spike SVW-1541, the laboratory control sample was used because of insufficient sample for an MS/MSD.

In the PCB analysis, the MS/MSD recoveries were diluted out.

All other MS/MSD recoveries were found to be within quality control limits.

**GULF COAST** ANALYTICAL LABORATORIES, INC.

**CASE NARRATIVE**

**Client:** EARTH TECH  
**Date:** 06/13/2001

**Group No:** 20013354

**ORGANIC QUALITY CONTROL CRITERIA:**

**Internal Standard Responses:** All internal standard responses met method quality control criteria.

**Analysis Comments:** In the Volatile analysis, sample 2010530034(SLG-T004) was diluted due to the presence of non-target analytes.

In the PCB and TPH-D analysis, several samples were diluted due to the presence of non-target analytes.

No other unusual analytical problems were encountered during the analysis of these samples.

**INORGANIC QUALITY CONTROL CRITERIA:**

**Holding Times:** All holding times were within method criteria.

**Method Blanks:** All method blanks were found to be within quality control criteria.

**Spike/Duplicate (S/D):** In the Metals water analysis of sample 2010530031(LIQ COMP), the RPD for duplicate Barium analysis is above the control limit. The heterogeneous nature of the QC sample is believed to be responsible for this.

In the Metals analysis, a post-digestion spike was performed on the QC sample for this batch because the recoveries for Cadmium, Lead, and Selenium were outside of the control limit in the matrix spike. The post-digestion spike recoveries for these elements were 70%, 69%, and 78%. A chemical or physical interference is suspected for Cadmium and Lead.

All other S/D recoveries were within quality control criteria.

**Laboratory Control Samples:** All LCS analyses met quality control criteria.

**Calibration Verifications:** All ICV, ICB, CCV, CCB analyses met all quality control criteria.

**Analysis Comments:** In the TCLP Metals ICP analysis of samples 2010530032(CHLOR COMP) and 2010530033(SOIL COMP), a chemical or physical interference necessitated a 2-fold dilution. This is reflected in the higher detection limit reported.

**GULF COAST** ANALYTICAL LABORATORIES, INC.

**CASE NARRATIVE**

**Client:** EARTH TECH  
**Date:** 06/13/2001

**Group No:** 20013354

**INORGANIC QUALITY CONTROL CRITERIA:**

**Analysis Comments:** In the Metals ICP solid analysis, a chemical or physical interference necessitated a 2-fold dilution for sample 2010530034(SLG-T004). This is reflected in the higher detection limit reported.

No other unusual analytical problems were encountered during the analysis of these samples.

## LABORATORY ENDORSEMENT

Sample receipt at Gulf Coast Analytical Laboratories, Inc. is documented for your designated sample(s). Chain-of-custody documentation, if provided, is included in this report.

Sample analysis was performed in accordance with Environmental Protection Agency protocol or other approved methods as designated in this report. All Quality Control criteria were found to be within Method Control Limits unless otherwise noted in the Case Narrative of this report. All results reported are to be considered Wet Weight Results unless dry weight determinations are made and the Case Narrative includes a statement that results are reported on a Dry Weight Basis.

### REPORT QUALIFIERS

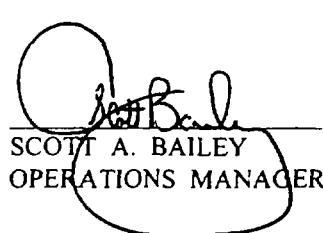
<DL	RESULT IS LESS THAN THE DETECTION LIMIT
DO	PARAMETER WAS DILUTED OUT
fld **	PARAMETER WAS PERFORMED IN THE FIELD
MI	MATRIX INTERFERENCE
NA	NOT APPLICABLE
ND	NOT DETECTED
subc **	ANALYSIS WAS SUBCONTRACTED
TNTC	TOO NUMEROUS TO COUNT
00:00	TIME NOT PROVIDED OR MIDNIGHT
SC	SAMPLE CONC $\geq$ 4 TIMES SPIKE CONC

\*\* These fields will appear in the analyst column

### ISO GUIDE 25 DECLARATION

In accordance with ISO Guide 25, this report shall be reproduced only in full, and with the written permission of Gulf Coast Analytical Laboratories, Inc. The results herein relate only to the sample(s) tested. Documented results are shown on the following page(s).

We appreciate this opportunity to provide you with this analytical service. If we can be of further assistance, please do not hesitate to contact us at (225)769-4900.

  
SCOTT A. BAILEY  
OPERATIONS MANAGER

This Report Contains 41 Pages.

**SAMPLE ANALYSIS****SAMPLE IDENTIFICATION**

Sample#	Matrix	Sample ID	Sample Date	Receive Date
2010530031	WATER	LIQ COMP	05/29/2001 15:30	05/30/2001 09:00

**METHOD SUMMARY**

Test	Method	Prep Date	Analysis Date
Mercury	SW7470A	05/31/2001 15:30	06/01/2001 13:59
Metals by EPA Method 6010	6010B	05/31/2001 15:30	06/02/2001 08:56
Flashpoint	1010		06/05/2001 09:50
Reactivity Cyanide	7.3.3.2	06/01/2001 08:30	06/02/2001 17:51
Reactivity Sulfide	7.3.4.2	06/01/2001 08:30	06/01/2001 11:00
pH	4500 H+B		05/30/2001 11:30
PCBs (8082)	8082	05/30/2001 13:00	06/06/2001 20:40
Semivolatiles (8270C)Water	8270C	05/31/2001 12:30	06/05/2001 12:16
TPH-Diesel	8015B-M Diesel	06/01/2001 07:30	06/07/2001 10:58
Volatiles (8260B) Water	8260B		06/04/2001 12:00

**ANALYTICAL RESULTS**

Metals Analyses	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Mercury	<DL	(mg/L Hg)	0.0002	1	131920	rea

Miscellaneous Analyses	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Flashpoint	>212	(DEG F)	50	1	132048	wmp
pH	7.59	(Units)	2	1	131791	olt
Reactivity Cyanide	<DL	(mg/L CN)	250	1	131960	klc
Reactivity Sulfide	<DL	(mg/L S)	80	1	131900	hlo

Metals by EPA Method 6010	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Silver	<DL	(mg/L)	0.01	1	131940	rea
Arsenic	<DL	(mg/L)	0.04	1	131940	rea
Barium	0.122	(mg/L)	0.01	1	131940	rea
Cadmium	<DL	(mg/L)	0.005	1	131940	rea
Chromium	<DL	(mg/L)	0.01	1	131940	rea
Lead	0.017	(mg/L)	0.015	1	131940	rea
Selenium	<DL	(mg/L)	0.04	1	131940	rea

PCBs (8082)	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Aroclor-1242	<DL	(ug/L)	1	1		tnt
Aroclor-1254	<DL	(ug/L)	1	1		tnt

# SAMPLE ANALYSIS

SAMPLE# 2010530031 CONTINUED

## ANALYTICAL RESULTS

PCBs (8082)	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Aroclor-1221	<DL	(ug/L)	1	1		tnt
Aroclor-1232	<DL	(ug/L)	1	1		tnt
Aroclor-1248	<DL	(ug/L)	1	1		tnt
Aroclor-1260	<DL	(ug/L)	1	1		tnt
Aroclor-1016	<DL	(ug/L)	1	1		tnt
<i>Surrogate(s)</i>	<i>%Recovery</i>		<i>LIMITS</i>			
Tetrachloro-m-xylene	MI		60-150			
Decachlorobiphenyl	MI		60-150			

Semivolatiles (8270C) Water	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Acenaphthene	<DL	(ug/L)	50	5	132035	rlw
Acenaphthylene	<DL	(ug/L)	50	5	132035	rlw
Anthracene	<DL	(ug/L)	50	5	132035	rlw
Benzidine	<DL	(ug/L)	200	5	132035	rlw
Benzo(a)anthracene	<DL	(ug/L)	50	5	132035	rlw
Benzo(a)pyrene	<DL	(ug/L)	50	5	132035	rlw
Benzo(b)fluoranthene	<DL	(ug/L)	50	5	132035	rlw
Benzo(ghi)perylene	<DL	(ug/L)	50	5	132035	rlw
Benzo(k)fluoranthene	<DL	(ug/L)	50	5	132035	rlw
bis(2-Chloroethoxy)methane	<DL	(ug/L)	50	5	132035	rlw
bis(2-Chloroethyl)ether	469	(ug/L)	50	5	132035	rlw
bis(2-Chloroisopropyl)ether	<DL	(ug/L)	50	5	132035	rlw
bis(2-Ethylhexyl)phthalate	<DL	(ug/L)	50	5	132035	rlw
4-Bromophenyl-phenylether	<DL	(ug/L)	50	5	132035	rlw
Butylbenzylphthalate	<DL	(ug/L)	50	5	132035	rlw
2-Chloronaphthalene	<DL	(ug/L)	50	5	132035	rlw
4-Chlorophenyl-phenylether	<DL	(ug/L)	50	5	132035	rlw
Chrysene	<DL	(ug/L)	50	5	132035	rlw
Dibenzo(a,h)anthracene	<DL	(ug/L)	50	5	132035	rlw
1,2-Dichlorobenzene	<DL	(ug/L)	50	5	132035	rlw
1,3-Dichlorobenzene	<DL	(ug/L)	50	5	132035	rlw
1,4-Dichlorobenzene	<DL	(ug/L)	50	5	132035	rlw
3,3-Dichlorobenzidine	<DL	(ug/L)	100	5	132035	rlw
Diethylphthalate	<DL	(ug/L)	50	5	132035	rlw
Dimethylphthalate	<DL	(ug/L)	50	5	132035	rlw
Di-n-butylphthalate	<DL	(ug/L)	50	5	132035	rlw
2,4-Dinitrotoluene	<DL	(ug/L)	50	5	132035	rlw
2,6-Dinitrotoluene	<DL	(ug/L)	50	5	132035	rlw
Di-n-octyl phthalate	<DL	(ug/L)	50	5	132035	rlw
1,2-Diphenylhydrazine (Note)	<DL	(ug/L)	50	5	132035	rlw
Fluoranthene	<DL	(ug/L)	50	5	132035	rlw
Fluorene	<DL	(ug/L)	50	5	132035	rlw
Hexachlorobenzene	<DL	(ug/L)	50	5	132035	rlw
Hexachlorobutadiene	<DL	(ug/L)	50	5	132035	rlw

Note: 1,2-Diphenylhydrazine as Azobenzene

# SAMPLE ANALYSIS

SAMPLE# 2010530031 CONTINUED

## ANALYTICAL RESULTS

Semivolatiles (8270C) Water	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Hexachlorocyclopentadiene	<DL	(ug/L)	50	5	132035	rlw
Hexachloroethane	<DL	(ug/L)	50	5	132035	rlw
Indeno(1,2,3-cd)pyrene	<DL	(ug/L)	50	5	132035	rlw
Isophorone	<DL	(ug/L)	50	5	132035	rlw
Naphthalene	92.2	(ug/L)	50	5	132035	rlw
Nitrobenzene	<DL	(ug/L)	50	5	132035	rlw
N-Nitrosodimethylamine	<DL	(ug/L)	50	5	132035	rlw
N-Nitroso-di-n-propylamine	<DL	(ug/L)	50	5	132035	rlw
N-Nitrosodiphenylamine (Note)	<DL	(ug/L)	50	5	132035	rlw
Phenanthrene	<DL	(ug/L)	50	5	132035	rlw
Pyrene	<DL	(ug/L)	50	5	132035	rlw
1,2,4-Trichlorobenzene	<DL	(ug/L)	50	5	132035	rlw
2-Methylnaphthalene	<DL	(ug/L)	50	5	132035	rlw
2-Chlorophenol	<DL	(ug/L)	50	5	132035	rlw
2,4-Dichlorophenol	<DL	(ug/L)	50	5	132035	rlw
2,4-Dimethylphenol	<DL	(ug/L)	50	5	132035	rlw
4,6-Dinitro-o-Cresol	<DL	(ug/L)	250	5	132035	rlw
2,4-Dinitrophenol	<DL	(ug/L)	250	5	132035	rlw
2-Nitrophenol	<DL	(ug/L)	50	5	132035	rlw
4-Nitrophenol	<DL	(ug/L)	250	5	132035	rlw
4-Chloro-3-Methylphenol	<DL	(ug/L)	50	5	132035	rlw
Pentachlorophenol	<DL	(ug/L)	250	5	132035	rlw
Phenol	<DL	(ug/L)	50	5	132035	rlw
2,4,6-Trichlorophenol	<DL	(ug/L)	50	5	132035	rlw
<i>Surrogate(s)</i>	<i>%Recovery</i>		<i>LIMITS</i>			
Nitrobenzene-d5	127**		43-110			
2-Fluorobiphenyl	96		16-128			
Terphenyl-d14	86		47-121			
Phenol-d6	34		10-76			
2-Fluorophenol	50		24-96			
2,4,6-Tribromophenol	104		19-133			

\*\* - Recovery Outside QC Limits

Note: N-Nitrosodiphenylamine decomposes in the GC inlet and cannot be separated from Diphenylamine

TPH-Diesel	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Total hydrocarbons (diesel)	<DL	(ug/L)	2000	10		tls
<i>Surrogate(s)</i>	<i>%Recovery</i>		<i>LIMITS</i>			
O-TERPHENYL	DO		60-140			

Volatiles (8260B) Water	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Acrylonitrile	<DL	(ug/L)	500	20	131983	rsp
Benzene	<DL	(ug/L)	100	20	131983	rsp
Bromoform	<DL	(ug/L)	100	20	131983	rsp
Carbon tetrachloride	<DL	(ug/L)	100	20	131983	rsp

**SAMPLE ANALYSIS**

SAMPLE# 2010530031 CONTINUED

**ANALYTICAL RESULTS**

<b>Volatiles (8260B) Water</b>	<b>Result</b>	<b>Unit</b>	<b>Reporting Limit</b>	<b>Dilution</b>	<b>QC Batch</b>	<b>By</b>
Chlorobenzene	<DL	(ug/L)	100	20	131983	rsp
Chlorodibromomethane	<DL	(ug/L)	100	20	131983	rsp
Chloroethane	<DL	(ug/L)	100	20	131983	rsp
Chloroform	<DL	(ug/L)	100	20	131983	rsp
Dichlorobromomethane	<DL	(ug/L)	100	20	131983	rsp
1,1-Dichloroethane	<DL	(ug/L)	100	20	131983	rsp
1,2-Dichloroethane	2290	(ug/L)	100	20	131983	rsp
1,1-Dichloroethylene	<DL	(ug/L)	100	20	131983	rsp
1,2-Dichloropropane	1320	(ug/L)	100	20	131983	rsp
cis-1,3-Dichloropropene	<DL	(ug/L)	100	20	131983	rsp
Ethylbenzene	<DL	(ug/L)	100	20	131983	rsp
Bromomethane	<DL	(ug/L)	100	20	131983	rsp
Chloromethane	<DL	(ug/L)	100	20	131983	rsp
Methylene chloride	231	(ug/L)	200	20	131983	rsp
1,1,2,2-Tetrachloroethane	<DL	(ug/L)	100	20	131983	rsp
Tetrachloroethylene	<DL	(ug/L)	100	20	131983	rsp
Toluene	1020	(ug/L)	100	20	131983	rsp
1,1,1-Trichloroethane	<DL	(ug/L)	100	20	131983	rsp
1,1,2-Trichloroethane	1090	(ug/L)	100	20	131983	rsp
Trichloroethene	107	(ug/L)	100	20	131983	rsp
Trichlorofluoromethane	<DL	(ug/L)	100	20	131983	rsp
Vinyl chloride	<DL	(ug/L)	100	20	131983	rsp
Styrene	<DL	(ug/L)	100	20	131983	rsp
Total Xylene	<DL	(ug/L)	200	20	131983	rsp
trans-1,3-Dichloropropene	<DL	(ug/L)	100	20	131983	rsp
1,2-Dichlorobenzene	<DL	(ug/L)	100	20	131983	rsp
1,3-Dichlorobenzene	<DL	(ug/L)	100	20	131983	rsp
1,4-Dichlorobenzene	<DL	(ug/L)	100	20	131983	rsp
trans-1,2-Dichloroethene	<DL	(ug/L)	100	20	131983	rsp
Carbon disulfide	<DL	(ug/L)	100	20	131983	rsp
Methyl ethyl ketone	<DL	(ug/L)	500	20	131983	rsp
1,1,1,2-Tetrachloroethane	<DL	(ug/L)	100	20	131983	rsp
Acetone	524	(ug/L)	500	20	131983	rsp
Vinyl Acetate	<DL	(ug/L)	100	20	131983	rsp
2-Hexanone	<DL	(ug/L)	100	20	131983	rsp
4-Methyl-2-pentanone	<DL	(ug/L)	100	20	131983	rsp
Ethylene Dibromide	<DL	(ug/L)	100	20	131983	rsp
1,2-Dibromo-3-chloropropane	<DL	(ug/L)	100	20	131983	rsp
trans-1,4-Dichloro-2-butene	<DL	(ug/L)	100	20	131983	rsp
Methylene bromide	<DL	(ug/L)	100	20	131983	rsp
Methyl iodide	<DL	(ug/L)	100	20	131983	rsp
1,2,3-Trichloropropane	355	(ug/L)	100	20	131983	rsp
Bromochloromethane	<DL	(ug/L)	100	20	131983	rsp
cis-1,2-Dichloroethene	<DL	(ug/L)	100	20	131983	rsp
<i>Surrogate(s)</i>	<i>%Recovery</i>		<i>LIMITS</i>			
1,2-Dichloroethane-d4	102		76-128			
Toluene-d8	98		83-112			

**SAMPLE ANALYSIS**

SAMPLE# 2010530031 CONTINUED

**ANALYTICAL RESULTS**

Volatiles (8260B) Water	Result	Unit	Reporting Limit	Dilution	QC Batch	By
4-Bromofluorobenzene	101		78-115			
Dibromofluoromethane	101		70-130			

# SAMPLE ANALYSIS

## SAMPLE IDENTIFICATION

Sample#	Matrix	Sample ID	Sample Date	Receive Date
2010530032	SOLID	CHLOR COMP	05/29/2001 14:45	05/30/2001 09:00

## METHOD SUMMARY

Test	Method	Prep Date	Analysis Date
Flashpoint	1010M		06/05/2001 09:50
Reactivity Cyanide	7.3.3.2	06/01/2001 08:30	06/02/2001 17:59
Reactivity Sulfide	7.3.4.2	06/01/2001 08:30	06/01/2001 11:00
pH/Extract	9045		05/31/2001 08:00
PCBs (8082)	8082	05/31/2001 13:00	06/06/2001 22:05
TCLP Metals	1311-6010/7000	05/31/2001 16:24	06/01/2001 11:45
TCLP-Semivolatiles(8270C)Solid	TCLP1311-8270C	05/31/2001 12:30	06/04/2001 19:01
TCLP-VOA (8260B) Solid	ZHE 1311-8260B	05/30/2001 17:00	06/12/2001 13:34
TPH-Diesel	8015B-M Diesel	05/30/2001 18:00	06/06/2001 21:06
Volatiles (8260B) Solid	8260B		06/10/2001 19:24

## ANALYTICAL RESULTS

Miscellaneous Analyses	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Flashpoint	>212	(DEG F)	50	1	132049	wmp
pH/Extract	7.88	(Units)	1	1	131848	olt
Reactivity Cyanide	<DL	(mg/kg CN)	250	1	131959	klc
Reactivity Sulfide	<DL	(mg/kg S)	80	1	131899	hlo

PCBs (8082)	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Aroclor-1242	<DL	(mg/kg)	40	1000		tnt
Aroclor-1254	<DL	(mg/kg)	40	1000		tnt
Aroclor-1221	<DL	(mg/kg)	40	1000		tnt
Aroclor-1232	<DL	(mg/kg)	40	1000		tnt
Aroclor-1248	<DL	(mg/kg)	40	1000		tnt
Aroclor-1260	<DL	(mg/kg)	40	1000		tnt
Aroclor-1016	<DL	(mg/kg)	40	1000		tnt
<i>Surrogate(s)</i>	<i>%Recovery</i>		<i>LIMITS</i>			
Tetrachloro-m-xylene	DO		60-150			
Decachlorobiphenyl	DO		60-150			

TCLP Metals	Result (mg/L)	Regulatory Limit	Reporting Limit	Dilution	QC Batch	By
Silver	<DL	5.0	0.25	5	131917	kdg
Arsenic	<DL	5.0	1	5	131917	kdg
Barium	<DL	100.0	5	5	131917	kdg
Cadmium	<DL	1.0	0.05	5	131917	kdg

**SAMPLE ANALYSIS**

SAMPLE# 2010530032 CONTINUED

**ANALYTICAL RESULTS**

TCLP Metals	Result (mg/L)	Regulatory Limit	Reporting Limit	Dilution	QC Batch	By
Chromium	<DL	5.0	0.25	5	131917	kdg
Lead	<DL	5.0	0.5	5	131917	kdg
Selenium	<DL	1.0	0.5	5	131917	kdg
Mercury	<DL	0.200	0.0002	1	131917	kdg

TCLP-Semivolatiles(8270C)Solid	Result (mg/L)	Regulatory Limit	Reporting Limit	Dilution	QC Batch	By
1,4-Dichlorobenzene	<DL	7.5	0.05	1	131982	rlw
2,4-Dinitrotoluene	<DL	0.13	0.05	1	131982	rlw
Hexachlorobenzene	<DL	0.13	0.05	1	131982	rlw
Hexachlorobutadiene	<DL	0.5	0.05	1	131982	rlw
Hexachloroethane	<DL	3.0	0.05	1	131982	rlw
Nitrobenzene	<DL	2.0	0.05	1	131982	rlw
Pyridine	<DL	5.0	0.05	1	131982	rlw
o-Cresol	<DL	200.0	0.05	1	131982	rlw
m & p-Cresol	<DL	200.0	0.05	1	131982	rlw
Cresols	<DL	200.0	0.1	1	131982	rlw
Pentachlorophenol	<DL	100.0	0.05	1	131982	rlw
2,4,5-Trichlorophenol	<DL	400.0	0.05	1	131982	rlw
2,4,6-Trichlorophenol	<DL	2.0	0.05	1	131982	rlw
<i>Surrogate(s)</i>		%Recovery	LIMITS			
Nitrobenzene-d5	109		43-110			
2-Fluorobiphenyl	91		16-128			
Terphenyl-d14	80		47-121			
Phenol-d6	42		10-76			
2-Fluorophenol	57		24-96			
2,4,6-Tribromophenol	86		19-133			

TCLP-VOA (8260B) Solid	Result (mg/L)	Regulatory Limit	Reporting Limit	Dilution	QC Batch	By
Benzene	<DL	0.5	0.2	40	132368	rjo
Carbon tetrachloride	<DL	0.5	0.2	40	132368	rjo
Chlorobenzene	<DL	100.0	0.2	40	132368	rjo
Chloroform	<DL	6.0	0.2	40	132368	rjo
1,2-Dichloroethane	<DL	0.5	0.2	40	132368	rjo
1,1-Dichloroethylene	<DL	0.7	0.2	40	132368	rjo
Methyl ethyl ketone	<DL	200.0	1	40	132368	rjo
Tetrachloroethylene	<DL	0.7	0.2	40	132368	rjo
Trichloroethylene	<DL	0.5	0.2	40	132368	rjo
Vinyl chloride	<DL	0.2	0.2	40	132368	rjo
<i>Surrogate(s)</i>		%Recovery	LIMITS			
1,2-Dichloroethane-d4	115		76-128			
Toluene-d8	96		83-112			
4-Bromofluorobenzene	108		78-115			
Dibromofluoromethane	102		70-130			

**SAMPLE ANALYSIS**

SAMPLE# 2010530032 CONTINUED

**ANALYTICAL RESULTS**

TPH-Diesel	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Total hydrocarbons (diesel)	<DL	(mg/kg)	200	100		
Surrogate(s)	%Recovery		LIMITS			
O-TERPHENYL	DO		60-140			tls

Volatiles (8260B) Solid	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Acrylonitrile	<DL	(mg/kg)	0.25	10	132268	jar
Benzene	<DL	(mg/kg)	0.05	10	132268	jar
Bromoform	<DL	(mg/kg)	0.05	10	132268	jar
Carbon tetrachloride	<DL	(mg/kg)	0.05	10	132268	jar
Chlorobenzene	<DL	(mg/kg)	0.05	10	132268	jar
Chlorodibromomethane	<DL	(mg/kg)	0.05	10	132268	jar
Chloroethane	<DL	(mg/kg)	0.05	10	132268	jar
Chloroform	<DL	(mg/kg)	0.05	10	132268	jar
Dichlorobromomethane	<DL	(mg/kg)	0.05	10	132268	jar
1,1-Dichloroethane	<DL	(mg/kg)	0.05	10	132268	jar
1,2-Dichloroethane	<DL	(mg/kg)	0.05	10	132268	jar
1,1-Dichloroethylene	<DL	(mg/kg)	0.05	10	132268	jar
1,2-Dichloropropane	<DL	(mg/kg)	0.05	10	132268	jar
cis-1,3-Dichloropropene	<DL	(mg/kg)	0.05	10	132268	jar
Ethylbenzene	<DL	(mg/kg)	0.05	10	132268	jar
Bromomethane	<DL	(mg/kg)	0.05	10	132268	jar
Chloromethane	<DL	(mg/kg)	0.05	10	132268	jar
Methylene chloride	<DL	(mg/kg)	0.1	10	132268	jar
1,1,2,2-Tetrachloroethane	0.202	(mg/kg)	0.05	10	132268	jar
Tetrachloroethylene	0.0645	(mg/kg)	0.05	10	132268	jar
Toluene	<DL	(mg/kg)	0.05	10	132268	jar
1,1,1-Trichloroethane	<DL	(mg/kg)	0.05	10	132268	jar
1,1,2-Trichloroethane	0.155	(mg/kg)	0.05	10	132268	jar
Trichloroethene	<DL	(mg/kg)	0.05	10	132268	jar
Trichlorofluoromethane	<DL	(mg/kg)	0.05	10	132268	jar
Vinyl chloride	<DL	(mg/kg)	0.05	10	132268	jar
Styrene	<DL	(mg/kg)	0.05	10	132268	jar
Total Xylene	<DL	(mg/kg)	0.1	10	132268	jar
trans-1,3-Dichloropropene	<DL	(mg/kg)	0.05	10	132268	jar
1,2-Dichlorobenzene	0.113	(mg/kg)	0.05	10	132268	jar
1,3-Dichlorobenzene	0.768	(mg/kg)	0.05	10	132268	jar
1,4-Dichlorobenzene	0.566	(mg/kg)	0.05	10	132268	jar
trans-1,2-Dichloroethene	<DL	(mg/kg)	0.05	10	132268	jar
Carbon disulfide	<DL	(mg/kg)	0.05	10	132268	jar
Methyl ethyl ketone	<DL	(mg/kg)	0.25	10	132268	jar
1,1,1,2-Tetrachloroethane	<DL	(mg/kg)	0.05	10	132268	jar
Acetone	<DL	(mg/kg)	0.25	10	132268	jar
Vinyl Acetate	<DL	(mg/kg)	0.05	10	132268	jar
2-Hexanone	<DL	(mg/kg)	0.05	10	132268	jar
4-Methyl-2-pentanone	<DL	(mg/kg)	0.05	10	132268	jar

**SAMPLE ANALYSIS**

SAMPLE# 2010530032 CONTINUED

**ANALYTICAL RESULTS**

<b>Volatiles (8260B) Solid</b>	<b>Result</b>	<b>Unit</b>	<b>Reporting Limit</b>	<b>Dilution</b>	<b>QC Batch</b>	<b>By</b>
Ethylene Dibromide	<DL	(mg/kg)	0.05	10	132268	jar
1,2-Dibromo-3-chloropropane	<DL	(mg/kg)	0.05	10	132268	jar
trans-1,4-Dichloro-2-butene	<DL	(mg/kg)	0.05	10	132268	jar
Methylene bromide	<DL	(mg/kg)	0.05	10	132268	jar
Methyl iodide	<DL	(mg/kg)	0.05	10	132268	jar
1,2,3-Trichloropropane	0.366	(mg/kg)	0.05	10	132268	jar
Bromochloromethane	<DL	(mg/kg)	0.05	10	132268	jar
cis-1,2-Dichloroethene	<DL	(mg/kg)	0.05	10	132268	jar
<i>Surrogate(s)</i>	<i>%Recovery</i>		<i>LIMITS</i>			
1,2-Dichloroethane-d4	98		60-140			
Toluene-d8	106		65-128			
4-Bromofluorobenzene	99		73-138			
Dibromofluoromethane	103		70-130			

**SAMPLE ANALYSIS****SAMPLE IDENTIFICATION**

Sample#	Matrix	Sample ID	Sample Date	Receive Date
2010530033	SOLID	SOIL COMP	05/29/2001 15:00	05/30/2001 09:00

**METHOD SUMMARY**

Test	Method	Prep Date	Analysis Date
Flashpoint	1010M		06/05/2001 09:50
Reactivity Cyanide	7.3.3.2	06/01/2001 08:30	06/02/2001 17:59
Reactivity Sulfide	7.3.4.2	06/01/2001 08:30	06/01/2001 11:00
pH/Extract	9045		05/31/2001 08:00
PCBs (8082)	8082	05/31/2001 13:00	06/06/2001 22:33
TCLP Metals	1311-6010/7000	05/31/2001 16:24	06/01/2001 11:45
TCLP-Semivolatiles(8270C)Solid	TCLP1311-8270C	05/31/2001 12:30	06/04/2001 19:31
TCLP-VOA (8260B) Solid	ZHE 1311-8260B	05/30/2001 17:00	06/12/2001 13:57
TPH-Diesel	8015B-M Diesel	05/30/2001 18:00	06/06/2001 22:47

**ANALYTICAL RESULTS**

Miscellaneous Analyses	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Flashpoint	>212	(DEG F)	50	1	132049	wmp
pH/Extract	12.07	(Units)	1	1	131848	olt
Reactivity Cyanide	<DL	(mg/kg CN)	250	1	131959	klc
Reactivity Sulfide	<DL	(mg/kg S)	80	1	131899	hlo

PCBs (8082)	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Aroclor-1242	<DL	(mg/kg)	40	1000		tnt
Aroclor-1254	<DL	(mg/kg)	40	1000		tnt
Aroclor-1221	<DL	(mg/kg)	40	1000		tnt
Aroclor-1232	<DL	(mg/kg)	40	1000		tnt
Aroclor-1248	<DL	(mg/kg)	40	1000		tnt
Aroclor-1260	<DL	(mg/kg)	40	1000		tnt
Aroclor-1016	<DL	(mg/kg)	40	1000		tnt
<i>Surrogate(s)</i>	<i>%Recovery</i>		<i>LIMITS</i>			
Tetrachloro-m-xylene	DO		60-150			
Decachlorobiphenyl	DO		60-150			

TCLP Metals	Result (mg/L)	Regulatory Limit	Reporting Limit	Dilution	QC Batch	By
Silver	<DL	5.0	0.1	2	131917	kdg
Arsenic	<DL	5.0	0.4	2	131917	kdg
Barium	<DL	100.0	2	2	131917	kdg
Cadmium	<DL	1.0	0.02	2	131917	kdg
Chromium	<DL	5.0	0.1	2	131917	kdg

**SAMPLE ANALYSIS**

SAMPLE# 2010530033 CONTINUED

**ANALYTICAL RESULTS**

TCLP Metals	Result (mg/L)	Regulatory Limit	Reporting Limit	Dilution	QC Batch	By
Lead	<DL	5.0	0.2	2	131917	kdg
Selenium	<DL	1.0	0.2	2	131917	kdg
Mercury	<DL	0.200	0.0002	1	131917	kdg

TCLP-Semivolatiles(8270C)Solid	Result (mg/L)	Regulatory Limit	Reporting Limit	Dilution	QC Batch	By
1,4-Dichlorobenzene	<DL	7.5	0.05	1	131982	rlw
2,4-Dinitrotoluene	<DL	0.13	0.05	1	131982	rlw
Hexachlorobenzene	<DL	0.13	0.05	1	131982	rlw
Hexachlorobutadiene	<DL	0.5	0.05	1	131982	rlw
Hexachloroethane	<DL	3.0	0.05	1	131982	rlw
Nitrobenzene	<DL	2.0	0.05	1	131982	rlw
Pyridine	<DL	5.0	0.05	1	131982	rlw
o-Cresol	<DL	200.0	0.05	1	131982	rlw
m & p-Cresol	<DL	200.0	0.05	1	131982	rlw
Cresols	<DL	200.0	0.1	1	131982	rlw
Pentachlorophenol	<DL	100.0	0.05	1	131982	rlw
2,4,5-Trichlorophenol	<DL	400.0	0.05	1	131982	rlw
2,4,6-Trichlorophenol	<DL	2.0	0.05	1	131982	rlw
<i>Surrogate(s)</i>	<i>%Recovery</i>		<i>LIMITS</i>			
Nitrobenzene-d5	96		43-110			
2-Fluorobiphenyl	92		16-128			
Terphenyl-d14	77		47-121			
Phenol-d6	45		10-76			
2-Fluorophenol	60		24-96			
2,4,6-Tribromophenol	83		19-133			

TCLP-VOA (8260B) Solid	Result (mg/L)	Regulatory Limit	Reporting Limit	Dilution	QC Batch	By
Benzene	<DL	0.5	0.2	40	132368	rjo
Carbon tetrachloride	<DL	0.5	0.2	40	132368	rjo
Chlorobenzene	<DL	100.0	0.2	40	132368	rjo
Chloroform	<DL	6.0	0.2	40	132368	rjo
1,2-Dichloroethane	<DL	0.5	0.2	40	132368	rjo
1,1-Dichloroethylene	<DL	0.7	0.2	40	132368	rjo
Methyl ethyl ketone	<DL	200.0	1	40	132368	rjo
Tetrachloroethylene	<DL	0.7	0.2	40	132368	rjo
Trichloroethylene	<DL	0.5	0.2	40	132368	rjo
Vinyl chloride	<DL	0.2	0.2	40	132368	rjo
<i>Surrogate(s)</i>	<i>%Recovery</i>		<i>LIMITS</i>			
1,2-Dichloroethane-d4	120		76-128			
Toluene-d8	98		83-112			
4-Bromofluorobenzene	116**		78-115			
Dibromofluoromethane	107		70-130			

\*\* - Recovery Outside QC Limits

**SAMPLE ANALYSIS**

SAMPLE# 2010530033 CONTINUED

**ANALYTICAL RESULTS**

TPH-Diesel	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Total hydrocarbons (diesel)	<DL	(mg/kg)	20	10		tls
<i>Surrogate(s)</i>	%Recovery		<i>LIMITS</i>			
O-TERPHENYL	DO		60-140			

**SAMPLE ANALYSIS****SAMPLE IDENTIFICATION**

Sample#	Matrix	Sample ID	Sample Date	Receive Date
2010530034	SOLID	SLG-T004	05/29/2001 11:45	05/30/2001 09:00

**METHOD SUMMARY**

Test	Method	Prep Date	Analysis Date
Mercury	7471A	06/05/2001 15:31	06/09/2001 04:58
Metals by EPA Method 6010	6010B	06/05/2001 15:31	06/09/2001 09:09
Flashpoint	1010M		06/06/2001 09:30
Reactivity Cyanide	7.3.3.2	06/01/2001 08:30	06/02/2001 17:59
Reactivity Sulfide	7.3.4.2	06/01/2001 08:30	06/01/2001 11:00
pH/Extract	9045		05/31/2001 07:30
PCBs (8082)	8082	06/01/2001 08:30	06/06/2001 12:58
Semivolatiles (8270C)Solid	8270C	06/01/2001 11:30	06/05/2001 22:06
Volatiles (8260B) Solid	8260B		06/13/2001 13:52

**ANALYTICAL RESULTS**

Metals Analyses	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Mercury	0.022	(mg/kg Hg)	0.01	1	132251	aas

Miscellaneous Analyses	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Flashpoint	>212	(DEG F)	50	1	132091	wmp
pH/Extract	5.67	(Units)	1	1	131848	olt
Reactivity Cyanide	<DL	(mg/kg CN)	250	1	131959	klc
Reactivity Sulfide	<DL	(mg/kg S)	80	1	131899	hlo

Metals by EPA Method 6010	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Silver	<DL	(mg/kg)	0.8	2	132250	aas
Arsenic	<DL	(mg/kg)	3.2	2	132250	aas
Barium	59.6	(mg/kg)	0.8	2	132250	aas
Cadmium	<DL	(mg/kg)	0.4	2	132250	aas
Chromium	3.89	(mg/kg)	0.8	2	132250	aas
Lead	86.9	(mg/kg)	1.2	2	132250	aas
Selenium	<DL	(mg/kg)	3.2	2	132250	aas

PCBs (8082)	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Aroclor-1242	<DL	(mg/kg)	6	150		rew
Aroclor-1254	<DL	(mg/kg)	6	150		rew
Aroclor-1221	<DL	(mg/kg)	6	150		rew

**SAMPLE ANALYSIS**

SAMPLE# 2010530034 CONTINUED

**ANALYTICAL RESULTS**

PCBs (8082)	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Aroclor-1232	<DL	(mg/kg)	6	150		rew
Aroclor-1248	<DL	(mg/kg)	6	150		rew
Aroclor-1260	<DL	(mg/kg)	6	150		rew
Aroclor-1016	<DL	(mg/kg)	6	150		rew
<i>Surrogate(s)</i>	<i>%Recovery</i>		<i>LIMITS</i>			
Tetrachloro-m-xylene	117		60-150			
Decachlorobiphenyl	106		60-150			

Semivolatiles (8270C)Solid	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Acenaphthene	<DL	(mg/kg)	495	1500	132104	rlw
Acenaphthylene	<DL	(mg/kg)	495	1500	132104	rlw
Anthracene	<DL	(mg/kg)	495	1500	132104	rlw
Benzidine	<DL	(mg/kg)	1980	1500	132104	rlw
Benzo(a)anthracene	<DL	(mg/kg)	495	1500	132104	rlw
Benzo(a)pyrene	<DL	(mg/kg)	495	1500	132104	rlw
Benzo(b)fluoranthene	<DL	(mg/kg)	495	1500	132104	rlw
Benzo(ghi)perylene	<DL	(mg/kg)	495	1500	132104	rlw
Benzo(k)fluoranthene	<DL	(mg/kg)	495	1500	132104	rlw
bis(2-Chloroethoxy)methane	<DL	(mg/kg)	495	1500	132104	rlw
bis(2-Chloroethyl)ether	<DL	(mg/kg)	495	1500	132104	rlw
bis(2-Chloroisopropyl)ether	<DL	(mg/kg)	495	1500	132104	rlw
bis(2-Ethylhexyl)phthalate	<DL	(mg/kg)	495	1500	132104	rlw
4-Bromophenyl-phenylether	<DL	(mg/kg)	495	1500	132104	rlw
Butylbenzylphthalate	<DL	(mg/kg)	495	1500	132104	rlw
2-Chloronaphthalene	<DL	(mg/kg)	495	1500	132104	rlw
4-Chlorophenyl-phenylether	<DL	(mg/kg)	495	1500	132104	rlw
Chrysene	<DL	(mg/kg)	495	1500	132104	rlw
Dibenzo(a,h)anthracene	<DL	(mg/kg)	495	1500	132104	rlw
1,2-Dichlorobenzene	<DL	(mg/kg)	495	1500	132104	rlw
1,3-Dichlorobenzene	<DL	(mg/kg)	495	1500	132104	rlw
1,4-Dichlorobenzene	<DL	(mg/kg)	495	1500	132104	rlw
3,3-Dichlorobenzidine	<DL	(mg/kg)	990	1500	132104	rlw
Diethylphthalate	<DL	(mg/kg)	495	1500	132104	rlw
Dimethylphthalate	<DL	(mg/kg)	495	1500	132104	rlw
Di-n-butylphthalate	<DL	(mg/kg)	495	1500	132104	rlw
2,4-Dinitrotoluene	<DL	(mg/kg)	495	1500	132104	rlw
2,6-Dinitrotoluene	<DL	(mg/kg)	495	1500	132104	rlw
Di-n-octyl phthalate	<DL	(mg/kg)	495	1500	132104	rlw
1,2-Diphenylhydrazine (Note)	<DL	(mg/kg)	495	1500	132104	rlw
Fluoranthene	<DL	(mg/kg)	495	1500	132104	rlw
Fluorene	1160	(mg/kg)	495	1500	132104	rlw
Hexachlorobenzene	<DL	(mg/kg)	495	1500	132104	rlw
Hexachlorobutadiene	<DL	(mg/kg)	495	1500	132104	rlw
Hexachlorocyclopentadiene	<DL	(mg/kg)	495	1500	132104	rlw

Note: 1,2-Diphenylhydrazine as Azobenzene

**SAMPLE ANALYSIS**

SAMPLE# 2010530034 CONTINUED

**ANALYTICAL RESULTS**

Semivolatiles (8270C)Solid	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Hexachloroethane	<DL	(mg/kg)	495	1500	132104	rlw
Indeno(1,2,3-c,d)pyrene	<DL	(mg/kg)	495	1500	132104	rlw
Isophorone	<DL	(mg/kg)	495	1500	132104	rlw
Naphthalene	3720	(mg/kg)	495	1500	132104	rlw
Nitrobenzene	<DL	(mg/kg)	495	1500	132104	rlw
N-Nitrosodimethylamine	<DL	(mg/kg)	495	1500	132104	rlw
N-Nitroso-di-n-propylamine	<DL	(mg/kg)	495	1500	132104	rlw
N-Nitrosodiphenylamine (Note)	<DL	(mg/kg)	495	1500	132104	rlw
Phenanthrene	7220	(mg/kg)	495	1500	132104	rlw
Pyrene	2160	(mg/kg)	495	1500	132104	rlw
1,2,4-Trichlorobenzene	<DL	(mg/kg)	495	1500	132104	rlw
2-Methylnaphthalene	8020	(mg/kg)	495	1500	132104	rlw
2-Chlorophenol	<DL	(mg/kg)	495	1500	132104	rlw
2,4-Dichlorophenol	<DL	(mg/kg)	495	1500	132104	rlw
2,4-Dimethylphenol	<DL	(mg/kg)	495	1500	132104	rlw
4,6-Dinitro-o-cresol	<DL	(mg/kg)	2480	1500	132104	rlw
2,4-Dinitrophenol	<DL	(mg/kg)	2480	1500	132104	rlw
2-Nitrophenol	<DL	(mg/kg)	495	1500	132104	rlw
4-Nitrophenol	<DL	(mg/kg)	2480	1500	132104	rlw
4-Chloro-3-Methylphenol	<DL	(mg/kg)	495	1500	132104	rlw
Pentachlorophenol	<DL	(mg/kg)	2480	1500	132104	rlw
Phenol	<DL	(mg/kg)	495	1500	132104	rlw
2,4,6-Trichlorophenol	<DL	(mg/kg)	495	1500	132104	rlw
<i>Surrogate(s)</i>	%Recovery	<b>LIMITS</b>				
Nitrobenzene-d5		DO	46-116			
2-Fluorobiphenyl		DO	39-116			
Terphenyl-d14		DO	24-137			
Phenol-d6		DO	34-113			
2-Fluorophenol		DO	44-106			
2,4,6-Tribromophenol	DO		17-120			

Note: N-Nitrosodiphenylamine decomposes in the GC inlet and cannot be separated from Diphenylamine

Volatiles (8260B) Solid	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Acrylonitrile	<DL	(mg/kg)	156	6250	132420	rsp
Benzene	<DL	(mg/kg)	31.2	6250	132420	rsp
Bromoform	<DL	(mg/kg)	31.2	6250	132420	rsp
Carbon tetrachloride	<DL	(mg/kg)	31.2	6250	132420	rsp
Chlorobenzene	<DL	(mg/kg)	31.2	6250	132420	rsp
Chlorodibromomethane	<DL	(mg/kg)	31.2	6250	132420	rsp
Chloroethane	<DL	(mg/kg)	31.2	6250	132420	rsp
Chloroform	<DL	(mg/kg)	31.2	6250	132420	rsp
Dichlorobromomethane	<DL	(mg/kg)	31.2	6250	132420	rsp
1,1-Dichloroethane	<DL	(mg/kg)	31.2	6250	132420	rsp
1,2-Dichloroethane	<DL	(mg/kg)	31.2	6250	132420	rsp
1,1-Dichloroethylene	<DL	(mg/kg)	31.2	6250	132420	rsp

**SAMPLE ANALYSIS**

SAMPLE# 2010530034 CONTINUED

**ANALYTICAL RESULTS**

<b>Volatiles (8260B) Solid</b>	<b>Result</b>	<b>Unit</b>	<b>Reporting Limit</b>	<b>Dilution</b>	<b>QC Batch</b>	<b>By</b>
1,2-Dichloropropane	<DL	(mg/kg)	31.2	6250	132420	rsp
cis-1,3-Dichloropropene	<DL	(mg/kg)	31.2	6250	132420	rsp
Ethylbenzene	<DL	(mg/kg)	31.2	6250	132420	rsp
Bromomethane	<DL	(mg/kg)	31.2	6250	132420	rsp
Chloromethane	<DL	(mg/kg)	31.2	6250	132420	rsp
Methylene chloride	<DL	(mg/kg)	62.5	6250	132420	rsp
1,1,2,2-Tetrachloroethane	<DL	(mg/kg)	31.2	6250	132420	rsp
Tetrachloroethylene	<DL	(mg/kg)	31.2	6250	132420	rsp
Toluene	<DL	(mg/kg)	31.2	6250	132420	rsp
1,1,1-Trichloroethane	<DL	(mg/kg)	31.2	6250	132420	rsp
1,1,2-Trichloroethane	<DL	(mg/kg)	31.2	6250	132420	rsp
Trichloroethene	<DL	(mg/kg)	31.2	6250	132420	rsp
Trichlorofluoromethane	<DL	(mg/kg)	31.2	6250	132420	rsp
Vinyl chloride	<DL	(mg/kg)	31.2	6250	132420	rsp
Styrene	<DL	(mg/kg)	31.2	6250	132420	rsp
Total Xylene	<DL	(mg/kg)	62.5	6250	132420	rsp
trans-1,3-Dichloropropene	<DL	(mg/kg)	31.2	6250	132420	rsp
1,2-Dichlorobenzene	<DL	(mg/kg)	31.2	6250	132420	rsp
1,3-Dichlorobenzene	<DL	(mg/kg)	31.2	6250	132420	rsp
1,4-Dichlorobenzene	<DL	(mg/kg)	31.2	6250	132420	rsp
trans-1,2-Dichloroethene	<DL	(mg/kg)	31.2	6250	132420	rsp
Carbon disulfide	<DL	(mg/kg)	31.2	6250	132420	rsp
Methyl ethyl ketone	<DL	(mg/kg)	156	6250	132420	rsp
1,1,1,2-Tetrachloroethane	<DL	(mg/kg)	31.2	6250	132420	rsp
Acetone	<DL	(mg/kg)	156	6250	132420	rsp
Vinyl Acetate	<DL	(mg/kg)	31.2	6250	132420	rsp
2-Hexanone	<DL	(mg/kg)	31.2	6250	132420	rsp
4-Methyl-2-pentanone	<DL	(mg/kg)	31.2	6250	132420	rsp
Ethylene Dibromide	<DL	(mg/kg)	31.2	6250	132420	rsp
1,2-Dibromo-3-chloropropane	<DL	(mg/kg)	31.2	6250	132420	rsp
trans-1,4-Dichloro-2-butene	<DL	(mg/kg)	31.2	6250	132420	rsp
Methylene bromide	<DL	(mg/kg)	31.2	6250	132420	rsp
Methyl iodide	<DL	(mg/kg)	31.2	6250	132420	rsp
1,2,3-Trichloropropane	<DL	(mg/kg)	31.2	6250	132420	rsp
Bromochloromethane	<DL	(mg/kg)	31.2	6250	132420	rsp
cis-1,2-Dichloroethene	<DL	(mg/kg)	31.2	6250	132420	rsp
<i>Surrogate(s)</i>	<i>%Recovery</i>		<b>LIMITS</b>			
1,2-Dichloroethane-d4	DO		60-140			
Toluene-d8	DO		65-128			
4-Bromofluorobenzene	DO		73-138			
Dibromofluoromethane	DO		70-130			

# QUALITY CONTROL SUMMARY

Report #: 20013354

Parameter	Units	METHOD BLANK		LABORATORY CONTROL STANDARD			Result 1	Result 2	RPD	SPIKE		
		Reporting Result	Blank Limit	Spiked Amount	Percent Recovery	QC Limits				Spiked Amount	Percent Recovery	QC Limits
QC Batch 131791												
pH	(Units)			5.00	101	99 - 101	7.59	7.56	0			
QC Batch 131848												
pH/Extract	(Units)			8.0	100	99 - 101	10.30	10.33	0			
QC Batch 131899												
Reactivity Sulfide	(mg/kg S)	<DL	80	906	109	20 - 120	<DL	<DL				
QC Batch 131900												
Reactivity Sulfide	(mg/L S)	<DL	80	906	109	20 - 120	<DL	<DL				
QC Batch 131917												
Silver	(mg/L)	<DL	0.05	0.250	106	79 - 120				0.250	94	74 - 125
Arsenic	(mg/L)	<DL	0.2	2.50	101	79 - 120				2.50	96	74 - 125
Barium	(mg/L)	<DL	1	10.0	89	79 - 120				10.0	94	74 - 125
Cadmium	(mg/L)	<DL	0.01	0.250	90	79 - 120				0.250	90	74 - 125
Chromium	(mg/L)	<DL	0.05	1.00	91	79 - 120				1.00	91	74 - 125
Mercury	(mg/L)	<DL	0.0002	0.00500	94	79 - 120				0.00500	95	74 - 125
Lead	(mg/L)	<DL	0.1	2.50	87	79 - 120				2.50	86	74 - 125
Selenium	(mg/L)	<DL	0.1	2.50	105	79 - 120				2.50	108	74 - 125
QC Batch 131920												
Mercury	(mg/L Hg)	<DL	0.0002	0.00500	104	79 - 120	<DL	<DL		0.00500	104	74 - 125
QC Batch 131940												
Silver	(mg/L)	<DL	0.01	0.250	104	79 - 120	<DL	<DL		0.250	111	74 - 125
Arsenic	(mg/L)	<DL	0.04	2.50	100	79 - 120	<DL	<DL		2.50	102	74 - 125
Barium	(mg/L)	<DL	0.01	10.0	95	79 - 120	0.122	0.176	36 *	10.0	93	74 - 125
Cadmium	(mg/L)	<DL	0.005	0.250	94	79 - 120	<DL	<DL		0.250	89	74 - 125
Chromium	(mg/L)	<DL	0.01	1.00	95	79 - 120	<DL	0.017		1.00	96	74 - 125
Lead	(mg/L)	<DL	0.015	2.50	92	79 - 120	0.017	0.018	6	2.50	88	74 - 125
Selenium	(mg/L)	<DL	0.04	2.50	104	79 - 120	<DL	<DL		2.50	103	74 - 125

\*Outside QC Limits - See Narrative

# QUALITY CONTROL SUMMARY

Report #: 20013354

Parameter	Units	METHOD BLANK		LABORATORY CONTROL STANDARD			DUPLICATE			SPIKE		
		Reporting Result	Limit	Spiked Amount	Percent Recovery	QC Limits	Result 1	Result 2	RPD	Spiked Amount	Percent Recovery	QC Limits
<b>QC Batch 131959</b>												
Reactivity Cyanide	(mg/kg CN)	<DL	250				<DL	<DL				
<b>QC Batch 131960</b>												
Reactivity Cyanide	(mg/L CN)	<DL	250				<DL	<DL				
<b>QC Batch 131982</b>												
Pentachlorophenol	(mg/L)	<DL	0.05	0.2	77	31 - 128						
2,4,6-Trichlorophenol	(mg/L)	<DL	0.05									
2,4,5-Trichlorophenol	(mg/L)	<DL	0.05									
o-Cresol	(mg/L)	<DL	0.05									
Cresols	(mg/L)	<DL	0.1									
1,4-Dichlorobenzene	(mg/L)	<DL	0.05	0.1	71	40 - 122						
m & p-Cresol	(mg/L)	<DL	0.05									
2,4-Dinitrotoluene	(mg/L)	<DL	0.05	0.1	97	60 - 124						
Hexachlorobenzene	(mg/L)	<DL	0.05									
Hexachlorobutadiene	(mg/L)	<DL	0.05									
Hexachloroethane	(mg/L)	<DL	0.05									
Nitrobenzene	(mg/L)	<DL	0.05									
Pyridine	(mg/L)	<DL	0.05									
<b>QC Batch 131983</b>												
Acrylonitrile	(ug/L)	<DL	25									
Benzene	(ug/L)	<DL	5	50	105	74 - 128						
Bromoform	(ug/L)	<DL	5									
Carbon tetrachloride	(ug/L)	<DL	5									
Chlorobenzene	(ug/L)	<DL	5	50	109	78 - 125						
Chlorodibromomethane	(ug/L)	<DL	5									
Chloroethane	(ug/L)	<DL	5									
Chloroform	(ug/L)	<DL	5									
Dichlorobromomethane	(ug/L)	<DL	5									
1,1-Dichloroethane	(ug/L)	<DL	5									
1,2-Dichloroethane	(ug/L)	<DL	5									
1,1-Dichloroethylene	(ug/L)	<DL	5	50	102	67 - 140						

# QUALITY CONTROL SUMMARY

Report #: 20013354

Parameter	Units	METHOD BLANK		LABORATORY CONTROL STANDARD			DUPLICATE			SPIKE		
		Result	Reporting Limit	Spiked Amount	Percent Recovery	QC Limits	Result 1	Result 2	RPD	Spiked Amount	Percent Recovery	QC Limits
1,2-Dichloropropane	(ug/L)	<DL	5									
Ethylbenzene	(ug/L)	<DL	5									
Bromomethane	(ug/L)	<DL	5									
Chloromethane	(ug/L)	<DL	5									
Methylene chloride	(ug/L)	<DL	10									
1,1,2,2-Tetrachloroethane	(ug/L)	<DL	5									
Tetrachloroethylene	(ug/L)	<DL	5									
Toluene	(ug/L)	<DL	5	50	110	76 - 125						
1,1,1-Trichloroethane	(ug/L)	<DL	5									
1,1,2-Trichloroethane	(ug/L)	<DL	5									
Trichloroethene	(ug/L)	<DL	5	50	94	63 - 118						
Trichlorofluoromethane	(ug/L)	<DL	5									
Vinyl chloride	(ug/L)	<DL	2									
Styrene	(ug/L)	<DL	5									
Total Xylene	(ug/L)	<DL	10									
trans-1,3-Dichloropropene	(ug/L)	<DL	5									
1,2-Dichlorobenzene	(ug/L)	<DL	5									
1,4-Dichlorobenzene	(ug/L)	<DL	5									
1,3-Dichlorobenzene	(ug/L)	<DL	5									
trans-1,2-Dichloroethene	(ug/L)	<DL	5									
Carbon disulfide	(ug/L)	<DL	5									
Methyl ethyl ketone	(ug/L)	<DL	25									
1,1,1,2-Tetrachloroethane	(ug/L)	<DL	5									
Acetone	(ug/L)	<DL	25									
Vinyl Acetate	(ug/L)	<DL	5									
2-Hexanone	(ug/L)	<DL	5									
4-Methyl-2-pentanone	(ug/L)	<DL	5									
1,2-Dibromo-3-chloropropane	(ug/L)	<DL	5									
Ethylene Dibromide	(ug/L)	<DL	5									
trans-1,4-Dichloro-2-butene	(ug/L)	<DL	5									
Methylene bromide	(ug/L)	<DL	5									
Methyl iodide	(ug/L)	<DL	5									
1,2,3-Trichloropropane	(ug/L)	<DL	5									
cis-1,3-Dichloropropene	(ug/L)	<DL	5									

# QUALITY CONTROL SUMMARY

Report #: 20013354

Parameter	Units	METHOD BLANK		LABORATORY CONTROL STANDARD			DUPLICATE			SPIKE		
		Reporting Result	Limit	Spiked Amount	Percent Recovery	QC Limits	Result 1	Result 2	RPD	Spiked Amount	Percent Recovery	QC Limits
Bromochloromethane	(ug/L)	<DL	5									
cis-1,2-Dichloroethene	(ug/L)	<DL	5									
<b>QC Batch 132035</b>												
2-Chlorophenol	(ug/L)	<DL	10	200	68	38 - 90						
Acenaphthene	(ug/L)	<DL	10	100	84	58 - 98						
2,4-Dichlorophenol	(ug/L)	<DL	10									
Acenaphthylene	(ug/L)	<DL	10									
2,4-Dimethylphenol	(ug/L)	<DL	10									
Anthracene	(ug/L)	<DL	10									
4,6-Dinitro-o-Cresol	(ug/L)	<DL	50									
Benzidine	(ug/L)	<DL	40									
2,4-Dinitrophenol	(ug/L)	<DL	50									
Benzo(a)anthracene	(ug/L)	<DL	10									
2-Nitrophenol	(ug/L)	<DL	10									
Benzo(a)pyrene	(ug/L)	<DL	10									
4-Nitrophenol	(ug/L)	<DL	50	200	23	8 - 62						
Benzo(b)fluoranthene	(ug/L)	<DL	10									
4-Chloro-3-Methylphenol	(ug/L)	<DL	10	200	71	45 - 98						
Benzo(ghi)perylene	(ug/L)	<DL	10									
Pentachlorophenol	(ug/L)	<DL	50	200	80	32 - 132						
Benzo(k)fluoranthene	(ug/L)	<DL	10									
Phenol	(ug/L)	<DL	10	200	28	8 - 53						
bis(2-Chloroethoxy)methane	(ug/L)	<DL	10									
2,4,6-Trichlorophenol	(ug/L)	<DL	10									
bis(2-Chloroethyl)ether	(ug/L)	<DL	10									
bis(2-Chloroisopropyl)ether	(ug/L)	<DL	10									
bis(2-Ethylhexyl)phthalate	(ug/L)	<DL	10									
4-Bromophenyl-phenylether	(ug/L)	<DL	10									
Butylbenzylphthalate	(ug/L)	<DL	10									
2-Chloronaphthalene	(ug/L)	<DL	10									
4-Chlorophenyl-phenylether	(ug/L)	<DL	10									
Chrysene	(ug/L)	<DL	10									
Dibenzo(a,h)anthracene	(ug/L)	<DL	10									

# QUALITY CONTROL SUMMARY

Report #: 20013354

Parameter	Units	METHOD BLANK		LABORATORY CONTROL STANDARD			DUPLICATE			SPIKE		
		Reporting Result	Limit	Spiked Amount	Percent Recovery	QC Limits	Result 1	Result 2	RPD	Spiked Amount	Percent Recovery	QC Limits
1,2-Dichlorobenzene	(ug/L)	<DL	10									
1,3-Dichlorobenzene	(ug/L)	<DL	10									
1,4-Dichlorobenzene	(ug/L)	<DL	10	100	71	46 - 93						
3,3-Dichlorobenzidine	(ug/L)	<DL	20									
Diethylphthalate	(ug/L)	<DL	10									
Dimethylphthalate	(ug/L)	<DL	10									
Di-n-butylphthalate	(ug/L)	<DL	10									
2,4-Dinitrotoluene	(ug/L)	<DL	10	100	97	67 - 123						
2,6-Dinitrotoluene	(ug/L)	<DL	10									
Di-n-octyl phthalate	(ug/L)	<DL	10									
1,2-Diphenylhydrazine *	(ug/L)	<DL	10									
Fluoranthene	(ug/L)	<DL	10									
Fluorene	(ug/L)	<DL	10									
Hexachlorobenzene	(ug/L)	<DL	10									
Hexachlorobutadiene	(ug/L)	<DL	10									
Hexachlorocyclopentadiene	(ug/L)	<DL	10									
Hexachloroethane	(ug/L)	<DL	10									
Indeno(1,2,3-cd)pyrene	(ug/L)	<DL	10									
Isophorone	(ug/L)	<DL	10									
Naphthalene	(ug/L)	<DL	10									
Nitrobenzene	(ug/L)	<DL	10									
N-Nitrosodimethylamine	(ug/L)	<DL	10									
N-Nitroso-di-n-propylamine	(ug/L)	<DL	10	100	91	55 - 102						
N-Nitrosodiphenylamine **	(ug/L)	<DL	10									
Phenanthrene	(ug/L)	<DL	10									
Pyrene	(ug/L)	<DL	10	100	104	44 - 114						
1,2,4-Trichlorobenzene	(ug/L)	<DL	10	100	77	53 - 113						
2-Methylnaphthalene	(ug/L)	<DL	10									
QC Batch 132048												
Flashpoint	(DEG F)			81	102	97 - 102	>212	>212				
QC Batch 132049												
Flashpoint	(DEG F)			81	102	97 - 102	>212	>212				

# QUALITY CONTROL SUMMARY

Report #: 20013354

Parameter	Units	METHOD BLANK		LABORATORY CONTROL STANDARD			DUPLICATE			SPIKE		
		Reporting Result	Spiked Limit	Spiked Amount	Percent Recovery	QC Limits	Result 1	Result 2	RPD	Spiked Amount	Percent Recovery	QC Limits
QC Batch 132091												
Flashpoint	(DEG F)			81	100	97 - 102	>212	>212				
QC Batch 132104												
2-Chlorophenol	(mg/kg)	<DL	49.5	400	96	31 - 124						
Acenaphthene	(mg/kg)	<DL	49.5	200	104	56 - 116						
2,4-Dichlorophenol	(mg/kg)	<DL	49.5									
Acenaphthylene	(mg/kg)	<DL	49.5									
2,4-Dimethylphenol	(mg/kg)	<DL	49.5									
Anthracene	(mg/kg)	<DL	49.5									
4,6-Dinitro-o-cresol	(mg/kg)	<DL	247									
Benzidine	(mg/kg)	<DL	198									
2,4-Dinitrophenol	(mg/kg)	<DL	247									
Benzo(a)anthracene	(mg/kg)	<DL	49.5									
2-Nitrophenol	(mg/kg)	<DL	49.5									
Benzo(a)pyrene	(mg/kg)	<DL	49.5									
4-Nitrophenol	(mg/kg)	<DL	247	400	78	23 - 130						
Benzo(b)fluoranthene	(mg/kg)	<DL	49.5									
4-Chloro-3-Methylphenol	(mg/kg)	<DL	49.5	400	90	38 - 118						
Benzo(ghi)perylene	(mg/kg)	<DL	49.5									
Pentachlorophenol	(mg/kg)	<DL	247	400	62	30 - 125						
Benzo(k)fluoranthene	(mg/kg)	<DL	49.5									
Phenol	(mg/kg)	<DL	49.5	400	93	29 - 127						
bis(2-Chloroethoxy)methane	(mg/kg)	<DL	49.5									
2,4,6-Trichlorophenol	(mg/kg)	<DL	49.5									
bis(2-Chloroethyl)ether	(mg/kg)	<DL	49.5									
bis(2-Chloroisopropyl)ether	(mg/kg)	<DL	49.5									
bis(2-Ethylhexyl)phthalate	(mg/kg)	<DL	49.5									
4-Bromophenyl-phenylether	(mg/kg)	<DL	49.5									
Butylbenzylphthalate	(mg/kg)	<DL	49.5									
2-Chloronaphthalene	(mg/kg)	<DL	49.5									
4-Chlorophenyl-phenylether	(mg/kg)	<DL	49.5									
Chrysene	(mg/kg)	<DL	49.5									
Dibenzo(a,h)anthracene	(mg/kg)	<DL	49.5									

# QUALITY CONTROL SUMMARY

Report #: 20013354

Parameter	Units	METHOD BLANK		LABORATORY CONTROL STANDARD			DUPLICATE			SPIKE		
		Reporting Result	Limit	Spiked Amount	Percent Recovery	QC Limits	Result 1	Result 2	RPD	Spiked Amount	Percent Recovery	QC Limits
1,2-Dichlorobenzene	(mg/kg)	<DL	49.5									
1,3-Dichlorobenzene	(mg/kg)	<DL	49.5									
1,4-Dichlorobenzene	(mg/kg)	<DL	49.5	200	103	49 - 107						
3,3-Dichlorobenzidine	(mg/kg)	<DL	99									
Diethylphthalate	(mg/kg)	<DL	49.5									
Dimethylphthalate	(mg/kg)	<DL	49.5									
Di-n-butylphthalate	(mg/kg)	<DL	49.5									
2,4-Dinitrotoluene	(mg/kg)	<DL	49.5	200	107	58 - 122						
2,6-Dinitrotoluene	(mg/kg)	<DL	49.5									
Di-n-octyl phthalate	(mg/kg)	<DL	49.5									
1,2-Diphenylhydrazine *	(mg/kg)	<DL	49.5									
Fluoranthene	(mg/kg)	<DL	49.5									
Fluorene	(mg/kg)	<DL	49.5									
Hexachlorobenzene	(mg/kg)	<DL	49.5									
Hexachlorobutadiene	(mg/kg)	<DL	49.5									
Hexachlorocyclopentadiene	(mg/kg)	<DL	49.5									
Hexachloroethane	(mg/kg)	<DL	49.5									
Indeno(1,2,3-c,d)pyrene	(mg/kg)	<DL	49.5									
Isophorone	(mg/kg)	<DL	49.5									
Naphthalene	(mg/kg)	<DL	49.5									
Nitrobenzene	(mg/kg)	<DL	49.5									
N-Nitrosodimethylamine	(mg/kg)	<DL	49.5									
N-Nitroso-di-n-propylamine	(mg/kg)	<DL	49.5	200	108	60 - 115						
N-Nitrosodiphenylamine **	(mg/kg)	<DL	49.5									
Phenanthrene	(mg/kg)	<DL	49.5									
Pyrene	(mg/kg)	<DL	49.5	200	88	54 - 122						
1,2,4-Trichlorobenzene	(mg/kg)	<DL	49.5	200	104	57 - 117						
2-Methylnaphthalene	(mg/kg)	<DL	49.5									
<b>QC Batch 132250</b>												
Silver	(mg/kg)	<DL	0.4	10.0	107	79 - 120	<DL	<DL		10.0	82	74 - 125
Arsenic	(mg/kg)	<DL	1.6	100	100	79 - 120	<DL	<DL		100	80	74 - 125
Barium	(mg/kg)	<DL	0.4	400	97	79 - 120	66.5	63.3	5	400	81	74 - 125
Cadmium	(mg/kg)	<DL	0.2	10.0	93	79 - 120	<DL	<DL		10.0	65 *	74 - 125

\*Outside QC Limits - See Narrative

# QUALITY CONTROL SUMMARY

Report #: 20013354

Parameter	Units	METHOD BLANK		LABORATORY CONTROL STANDARD			DUPLICATE			SPIKE		
		Reporting Result	Limit	Spiked Amount	Percent Recovery	QC Limits	Result 1	Result 2	RPD	Spiked Amount	Percent Recovery	QC Limits
Chromium	(mg/kg)	<DL	0.4	40.0	100	79 - 120	9.37	9.04	4	40.0	82	74 - 125
Lead	(mg/kg)	<DL	0.6	100	96	79 - 120	5.08	5.20	2	100	73 *	74 - 125
Selenium	(mg/kg)	<DL	1.6	100	97	79 - 120	<DL	<DL	.	100	73 *	74 - 125
<b>QC Batch 132251</b>												
Mercury	(mg/kg Hg)	<DL	0.01	0.250	100	79 - 120	0.049	0.043	13	0.250	99	74 - 125
<b>QC Batch 132268</b>												
Acrylonitrile	(mg/kg)	<DL	0.025									
Benzene	(mg/kg)	<DL	0.005	0.05	98	77 - 126						
Bromoform	(mg/kg)	<DL	0.005									
Carbon tetrachloride	(mg/kg)	<DL	0.005									
Chlorobenzene	(mg/kg)	<DL	0.005	0.05	111	80 - 121						
Chlorodibromomethane	(mg/kg)	<DL	0.005									
Chloroethane	(mg/kg)	<DL	0.005									
Chloroform	(mg/kg)	<DL	0.005									
Dichlorobromomethane	(mg/kg)	<DL	0.005									
1,1-Dichloroethane	(mg/kg)	<DL	0.005									
1,2-Dichloroethane	(mg/kg)	<DL	0.005									
1,1-Dichloroethylene	(mg/kg)	<DL	0.005	0.05	80	70 - 131						
1,2-Dichloropropane	(mg/kg)	<DL	0.005									
Ethylbenzene	(mg/kg)	<DL	0.005									
Bromomethane	(mg/kg)	<DL	0.005									
Chloromethane	(mg/kg)	<DL	0.005									
Methylene chloride	(mg/kg)	<DL	0.01									
1,1,2,2-Tetrachloroethane	(mg/kg)	<DL	0.005									
Tetrachloroethylene	(mg/kg)	<DL	0.005									
Toluene	(mg/kg)	<DL	0.005	0.05	104	76 - 124						
1,1,1-Trichloroethane	(mg/kg)	<DL	0.005									
1,1,2-Trichloroethane	(mg/kg)	<DL	0.005									
Trichloroethene	(mg/kg)	<DL	0.005	0.05	104	70 - 124						
Trichlorofluoromethane	(mg/kg)	<DL	0.005									
Vinyl chloride	(mg/kg)	<DL	0.005									
Styrene	(mg/kg)	<DL	0.005									

\*Outside QC Limits - See Narrative

# QUALITY CONTROL SUMMARY

Report #: 20013354

Parameter	Units	METHOD BLANK		LABORATORY CONTROL STANDARD			DUPLICATE			SPIKE		
		Reporting Result	Spiked Limit	Spiked Amount	Percent Recovery	QC Limits	Result 1	Result 2	RPD	Spiked Amount	Percent Recovery	QC Limits
Total Xylene	(mg/kg)	<DL	0.01									
trans-1,3-Dichloropropene	(mg/kg)	<DL	0.005									
1,2-Dichlorobenzene	(mg/kg)	<DL	0.005									
1,4-Dichlorobenzene	(mg/kg)	<DL	0.005									
1,3-Dichlorobenzene	(mg/kg)	<DL	0.005									
trans-1,2-Dichloroethene	(mg/kg)	<DL	0.005									
Carbon disulfide	(mg/kg)	<DL	0.005									
Methyl ethyl ketone	(mg/kg)	<DL	0.025									
1,1,1,2-Tetrachloroethane	(mg/kg)	<DL	0.005									
Acetone	(mg/kg)	<DL	0.025									
Vinyl Acetate	(mg/kg)	<DL	0.005									
2-Hexanone	(mg/kg)	<DL	0.005									
4-Methyl-2-pentanone	(mg/kg)	<DL	0.005									
1,2-Dibromo-3-chloropropane	(mg/kg)	<DL	0.005									
Ethylene Dibromide	(mg/kg)	<DL	0.005									
trans-1,4-Dichloro-2-butene	(mg/kg)	<DL	0.005									
Methylene bromide	(mg/kg)	<DL	0.005									
Methyl iodide	(mg/kg)	<DL	0.005									
1,2,3-Trichloropropane	(mg/kg)	<DL	0.005									
cis-1,3-Dichloropropene	(mg/kg)	<DL	0.005									
Bromochloromethane	(mg/kg)	<DL	0.005									
cis-1,2-Dichloroethene	(mg/kg)	<DL	0.005									
<b>QC Batch 132368</b>												
Benzene	(mg/L)	<DL	5	50	114	74 - 128						
Carbon tetrachloride	(mg/L)	<DL	5									
Chlorobenzene	(mg/L)	<DL	5	50	118	78 - 125						
Chloroform	(mg/L)	<DL	5									
1,2-Dichloroethane	(mg/L)	<DL	5									
1,1-Dichloroethylene	(mg/L)	<DL	5	50	128	67 - 140						
Tetrachloroethylene	(mg/L)	<DL	5									
Trichloroethylene	(mg/L)	<DL	5	50	117	63 - 118						
Vinyl chloride	(mg/L)	<DL	5									
Methyl ethyl ketone	(mg/L)	<DL	25									

# QUALITY CONTROL SUMMARY

Report #: 20013354

Parameter	Units	METHOD BLANK		LABORATORY CONTROL STANDARD			DUPLICATE			SPIKE		
		Reporting Result	Limit	Spiked Amount	Percent Recovery	QC Limits	Result 1	Result 2	RPD	Spiked Amount	Percent Recovery	QC Limits
<b>QC Batch 132420</b>												
Acrylonitrile	(mg/kg)	<DL	3.12									
Benzene	(mg/kg)	<DL	0.625	6.25	125	77 - 126						
Bromoform	(mg/kg)	<DL	0.625									
Carbon tetrachloride	(mg/kg)	<DL	0.625									
Chlorobenzene	(mg/kg)	<DL	0.625	6.25	107	80 - 121						
Chlorodibromomethane	(mg/kg)	<DL	0.625									
Chloroethane	(mg/kg)	<DL	0.625									
Chloroform	(mg/kg)	<DL	0.625									
Dichlorobromomethane	(mg/kg)	<DL	0.625									
1,1-Dichloroethane	(mg/kg)	<DL	0.625									
1,2-Dichloroethane	(mg/kg)	<DL	0.625									
1,1-Dichloroethylene	(mg/kg)	<DL	0.625	6.25	104	70 - 131						
1,2-Dichloropropane	(mg/kg)	<DL	0.625									
Ethylbenzene	(mg/kg)	<DL	0.625									
Bromomethane	(mg/kg)	<DL	0.625									
Chloromethane	(mg/kg)	<DL	0.625									
Methylene chloride	(mg/kg)	<DL	1.25									
1,1,2,2-Tetrachloroethane	(mg/kg)	<DL	0.625									
Tetrachloroethylene	(mg/kg)	<DL	0.625									
Toluene	(mg/kg)	<DL	0.625	6.25	119	76 - 124						
1,1,1-Trichloroethane	(mg/kg)	<DL	0.625									
1,1,2-Trichloroethane	(mg/kg)	<DL	0.625									
Trichloroethene	(mg/kg)	<DL	0.625	6.25	115	70 - 124						
Trichlorofluoromethane	(mg/kg)	<DL	0.625									
Vinyl chloride	(mg/kg)	<DL	0.625									
Styrene	(mg/kg)	<DL	0.625									
Total Xylene	(mg/kg)	<DL	1.25									
trans-1,3-Dichloropropene	(mg/kg)	<DL	0.625									
1,2-Dichlorobenzene	(mg/kg)	<DL	0.625									
1,4-Dichlorobenzene	(mg/kg)	<DL	0.625									
1,3-Dichlorobenzene	(mg/kg)	<DL	0.625									
trans-1,2-Dichloroethene	(mg/kg)	<DL	0.625									
Carbon disulfide	(mg/kg)	<DL	0.625									

# QUALITY CONTROL SUMMARY

Report #: 20013354

Parameter	Units	METHOD BLANK		LABORATORY CONTROL STANDARD			DUPLICATE			SPIKE		
		Reporting Result	Limit	Spiked Amount	Percent Recovery	QC Limits	Result 1	Result 2	RPD	Spiked Amount	Percent Recovery	QC Limits
Methyl ethyl ketone	(mg/kg)	<DL	3.12									
1,1,1,2-Tetrachloroethane	(mg/kg)	<DL	0.625									
Acetone	(mg/kg)	<DL	3.12									
Vinyl Acetate	(mg/kg)	<DL	0.625									
2-Hexanone	(mg/kg)	<DL	0.625									
4-Methyl-2-pentanone	(mg/kg)	<DL	0.625									
1,2-Dibromo-3-chloropropane	(mg/kg)	<DL	0.625									
Ethylene Dibromide	(mg/kg)	<DL	0.625									
trans-1,4-Dichloro-2-butene	(mg/kg)	<DL	0.625									
Methylene bromide	(mg/kg)	<DL	0.625									
Methyl iodide	(mg/kg)	<DL	0.625									
1,2,3-Trichloropropane	(mg/kg)	<DL	0.625									
cis-1,3-Dichloropropene	(mg/kg)	<DL	0.625									
Bromochloromethane	(mg/kg)	<DL	0.625									
cis-1,2-Dichloroethene	(mg/kg)	<DL	0.625									

MATRIX SPIKE REPORT

Fraction : QC Reference List 8260

Method : 8260

Matrix : WATER

Quality Control Batch: 131983

Sample No: 2010531066

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS %	ADVISORY REC#	LIMITS REC
1,1-Dichloroethylene	50	<5	54.5	109		61-145
Benzene	50	<5	55.7	111		76-127
Trichloroethene	50	24.9	88.3	127*		71-120
Toluene	50	<5	59.4	119		76-125
Chlorobenzene	50	<5	62.6	125		75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD %	%	ADVISORY LIMITS	
			REC#	RPD#	RPD	REC
1,1-Dichloroethylene	50	54.2	108	1	14	61-145
Benzene	50	54.4	109	2	11	76-127
Trichloroethene	50	81.4	113	12	14	71-120
Toluene	50	58.2	116	2	13	76-125
Chlorobenzene	50	60.5	121	3	13	75-130

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 1 out of 10 outside limits

3A  
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name:

Contract:

Lab Code:

Case No.: 20013393 SAS No.:

SDG No.: 20013393

Matrix Spike - EPA Sample No.: CC-12-90

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene +	50.0	0.00	54.5	109	61-145
Benzene	50.0	0.00	55.7	111	76-127
Trichloroethene	50.0	24.9	88.3	127*	71-120
Toluene +	50.0	0.00	59.4	119	76-125
Chlorobenzene ++	50.0	0.00	62.6	125	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
1,1-Dichloroethene +	50.0	54.2	108	1	14	61-145
Benzene	50.0	54.4	109	2	11	76-127
Trichloroethene	50.0	81.4	113	12	14	71-120
Toluene +	50.0	58.2	116	2	13	76-125
Chlorobenzene ++	50.0	60.5	121	3	13	75-130

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 1 out of 10 outside limits

COMMENTS: OW826-197 In the Volatile analysis, the recovery for Trichloroethene was outside of the control limit in the MS due to this compound present in the sample; however, all recoveries in the MSD and the RPD are acceptable.

FORM 3  
WATER SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name:

Contract:

Lab Code:

Case No.: SVW1541 SAS No.:

SDG No.: SVW1541

Matrix Spike - BLK Sample No.: 0531SBLK01

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Phenol +	200	0.00	56.3	28	8- 53
2-Chlorophenol	200	0.00	136	68	38- 90
1, 4-Dichlorobenzene +	100	0.00	71.3	71	46- 93
N-Nitroso-di-n-propylam	100	0.00	90.6	91	55-102
1, 2, 4-Trichlorobenzene	100	0.00	76.6	77	53- 95
4-Chloro-3-Methylphenol	200	0.00	142	71	45- 98
Acenaphthene +	100	0.00	83.8	84	58- 98
4-Nitrophenol ++	200	0.00	46.0	23	8- 62
2, 4-Dinitrotoluene	100	0.00	96.9	97	67-123
Pentachlorophenol +	200	0.00	161	80	32-132
Pyrene	100	0.00	104	104	44-114

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 11 outside limits

COMMENTS: SVW-1541 In the Semivolatile analysis, the laboratory control sample was used because there was insufficient sample for an MS/MSD.

## SOIL VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name:

Contract:

Lab Code:

Case No.: 20013411 SAS No.:

SDG No.: 20013411

Matrix Spike - EPA Sample No.: API2-1

Level: (low/med) LOW

COMPOUND	SPIKE ADDED (MG/KG)	SAMPLE CONCENTRATION (MG/KG)	MS CONCENTRATION (MG/KG)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene +	0.0500	0.00	0.0466	93	59-172
Trichloroethene	0.0500	0.00	0.0552	110	62-137
Benzene	0.0500	0.00	0.0526	105	60-133
Toluene +	0.0500	0.00	0.0561	112	59-139
Chlorobenzene ++	0.0500	0.00	0.0572	114	66-142

COMPOUND	SPIKE ADDED (MG/KG)	MSD CONCENTRATION (MG/KG)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
1,1-Dichloroethene +	0.0500	0.0488	98	5	22	59-172
Trichloroethene	0.0500	0.0563	113	3	24	62-137
Benzene	0.0500	0.0536	107	2	21	60-133
Toluene +	0.0500	0.0592	118	5	21	59-139
Chlorobenzene ++	0.0500	0.0578	116	2	21	66-142

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: 2s1826-155

FORM 3  
SOIL VOLATILE LAB CONTROL SAMPLE

Lab Name:

Contract:

Lab Code:

Case No.: 0613VOLCS01 SAS No.:

SDG No.: 0613V0BLK01LCS

Matrix Spike - Sample No.: 0613V0BLK01 Level: (low/med) MED

COMPOUND	SPIKE ADDED (MG/KG)	SAMPLE CONCENTRATION (MG/KG)	LCS CONCENTRATION (MG/KG)	LCS # REC #	QC. LIMITS REC.
1,1-Dichloroethene +	6.25	0.00	6.48	104	70-131
Benzene	6.25	0.00	7.82	125	77-126
Trichloroethene	6.25	0.00	7.19	115	70-124
Toluene +	6.25	0.00	7.42	119	76-124
Chlorobenzene ++	6.25	0.00	6.71	107	80-121

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 5 outside limits

COMMENTS: OSM826-063 In the Volatiles analysis the LCS was used because the MS/MSD was diluted out due to nontarget analyte present in the sample.

FORM 3  
SOIL SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name:

Contract:

Lab Code:

Case No.: SVO282 SAS No.:

SDG No.: SVO282

Matrix Spike - BLK Sample No.: 0601SBLK03 Level: (low/med) LOW

COMPOUND	SPIKE ADDED (mg/Kg)	SAMPLE CONCENTRATION (mg/Kg)	LCS CONCENTRATION (mg/Kg)	LCS % REC #	QC. LIMITS REC.
Phenol +	400	0.00	373	93	29-127
2-Chlorophenol	400	0.00	386	96	31-124
1,4-Dichlorobenzene +	200	0.00	206	103	49-107
N-Nitroso-di-n-propylam	200	0.00	216	108	60-115
1,2,4-Trichlorobenzene	200	0.00	208	104	57-117
4-Chloro-3-Methylphenol	400	0.00	359	90	38-118
Acenaphthene +	200	0.00	208	104	56-116
4-Nitrophenol ++	400	0.00	313	78	23-130
2,4-Dinitrotoluene	200	0.00	214	107	58-122
Pentachlorophenol +	400	0.00	249	62	30-125
Pyrene	200	0.00	176	88	54-122

# Column to be used to flag recovery and RPD values with an asterisk  
 \* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 11 outside limits

COMMENTS: SVO-282 In the Semivolatile analysis, the laboratory control sample was used because there was matrix interference in the sample.

3A  
WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: 20013459 SAS No.: SDG No.: 20013459

Matrix Spike - EPA Sample No.: SP01A14

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene +	100	0.00	134	134	61-145
Benzene	100	0.00	107	107	76-127
Trichloroethene	100	279	400	121*	71-120
Toluene +	100	0.00	108	108	76-125
Chlorobenzene ++	100	0.00	102	102	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	MSD % RPD #	QC LIMITS RPD	QC LIMITS REC.
1,1-Dichloroethene +	100	117	117	14	14	61-145
Benzene	100	97.8	98	9	11	76-127
Trichloroethene	100	418	139*	14	14	71-120
Toluene +	100	96.1	96	12	13	76-125
Chlorobenzene ++	100	93.0	93	9	13	75-130

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 2 out of 10 outside limits

COMMENTS: 2W826-260 In the Volatile analysis, the recovery Trichloroethene was above the control limit in the MS/MSD; however, all RPD's are acceptable.



7979 GSRI Avenue  
Baton Rouge, LA  
70820-7402

(225) 769-4900 • Fax (225) 767-5717

# CHAIN OF CUSTODY RECORD

Lab use only

Earth Tech

Client Name

4360

20013354

6/16/01

Group #

Due Date

## Report to:

Client: SKINNER LANDFILL GROUP  
Address: 200 VINE STREET  
WILDER, KY 41076  
Contact: C/O EARTH TECH - MCKE SHERRON  
Phone: (859) 442-2300  
Fax: (859) 442-2311

P.O. Number 38335.05 Project Name/Number SKINNER LANDFILL / 38335.05

Sampled By:

M. SHERRON

## Bill to:

Client: EARTH TECH  
Address: SAME  
Contact:    
Phone:  
Fax:

## Analytical Requests & Method

RRA METALS  
8260  
8270  
RCI  
8081 PCB  
8085 - DIESOL  
TCP METALS / V/V

## Lab use only:

### Custody Seal

used  yes  no

in tact  yes  no

9

Temperature °C

Lab ID

5/30

31

32

33

34

Remarks:

USE GLOVES WITH  
CONTAINERS

Matrix <sup>1</sup>	Date	Time (2400)	c o m p	g r a b	Sample Description	Preservatives	No Containers	RRA METALS	8260	8270	RCI	8081 PCB	8085 - DIESOL	TCP METALS / V/V	Lab ID
WATER	5/29/01	1530	X		LIQ Comp	None	4		X	X	X	X	X		
			X		LIQ Comp	HCl	3		X						
	↓	↓	X		LIQ Comp	NETRIC	2	X							
Soil	5/29/01	1445	X		CHLOR Comp	None	1		X	X	X	X	X		32
Soil	5/29/01	1600	X		SCIE Comp	None	1			X	X	X	X		33
Liq	5/29/01	11:45	X		SLG - T004	None	4			X	X	X			
	↓	↓	X		SLG - T004	HCl	3		X						
	↓	↓	X		SLG - T004	NETRIC	2	X							

Turn Around Time:  24-48 hrs.  3 days  1 week  Standard  Other

Relinquished by: (Signature)

Michael Sherron  
FEC# 478941672378

Relinquished by: (Signature)

Received by: (Signature)

David K. L.

Received by: (Signature)

Date: \_\_\_\_\_ Time: \_\_\_\_\_

5/30/01 0900

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Note:

RCI - PRESERVE@LAB.  
CHLOR Comp SAMPLE - SHOWED CHLORINATED COMPOUNDS DURING FIELD  
SCREENING.

By submitting these samples, you agree to the terms and conditions contained in our most recent schedule of services.



# ANALYTICAL RESULTS

PERFORMED BY

**GULF COAST ANALYTICAL LABORATORIES, INC.**

**REPORT DATE: 06/11/2001**

**GCAL REPORT NO:  
20013385**

<b>DELIVER TO</b>	EARTH TECH, INC. 200 VINE STREET WILDER, KY 41076
<b>ATTENTION</b>	MIKE SHERRON
<b>CLIENT ID</b>	4360

## SAMPLE CROSS-REFERENCE

### SAMPLE IDENTIFICATION

Sample#	Matrix	Sample ID	Sample Date	Receive Date
2010531016	SOLID	GLUE TANK	05/30/2001 10:30	05/31/2001 09:25
2010531022	WATER	AG TANK	05/30/2001 15:45	05/31/2001 09:25

**GULF COAST** ANALYTICAL LABORATORIES, INC.

**CASE NARRATIVE**

**Client:** EARTH TECH  
**Date:** 06/11/2001

**Group No:** 20013385

**ORGANIC QUALITY CONTROL CRITERIA:**

**Holding Times:** All holding times were within method criteria.

**Method Blanks:** All method blanks were within quality control criteria.

**Instrument Calibration:** Both the initial and continuing calibrations were within method quality control criteria.

**Surrogate Spikes:** In the Volatile analysis, the surrogate 4-Bromofluorobenzene was slightly above the control limit in sample 2010531016(GLUE TANK).

In the PCB analysis, the surrogate recovery for sample 2010531016(GLUE TANK) was below the control limit, the sample was re-extracted with similar results, therefore, matrix interference is suspected.

All other surrogate recoveries were within quality control criteria.

**Matrix Spike/Matrix Spike Duplicate (MS/MSD):** In the Volatile analysis, the recovery for Trichloroethene was outside of the control limit in the MS due to this compound present in the sample; however, all recoveries in the MSD and the RPD are acceptable.

In the Semivolatile analysis, the laboratory control sample was used because of insufficient sample for an MS/MSD.

All other MS/MSD recoveries were found to be within quality control limits.

**Internal Standard Responses:** All internal standard responses met method quality control criteria.

**Analysis Comments:** In the TPH-D analysis, sample 2010231016(GLUE TANK) was given a 10-fold dilution in the prep procedure due to the matrix of the sample. At this dilution there was no Diesel pattern present.

No other unusual analytical problems were encountered during the analysis of these samples.

**GULF COAST** ANALYTICAL LABORATORIES, INC.

**CASE NARRATIVE**

**Client:** EARTH TECH

**Group No:** 20013385

**Date:** 06/11/2001

**INORGANIC QUALITY CONTROL CRITERIA:**

**Holding Times:** All holding times were within method criteria.

**Method Blanks:** All method blanks were found to be within quality control criteria.

**Spike/Duplicate (S/D):** In the Metals analysis, the RPD for duplicate Barium analysis is above the control limit. The heterogeneous nature of the QC sample is believed to be responsible for this.

All other S/D recoveries were within quality control criteria.

**Laboratory Control Samples:** All LCS analyses met quality control criteria.

**Calibration Verifications:** All ICV, ICB, CCV, CCB analyses met all quality control criteria.

**Analysis Comments:** No unusual analytical problems were encountered during the analysis of these samples.

## LABORATORY ENDORSEMENT

Sample receipt at Gulf Coast Analytical Laboratories, Inc. is documented for your designated sample(s). Chain-of-custody documentation, if provided, is included in this report.

Sample analysis was performed in accordance with Environmental Protection Agency protocol or other approved methods as designated in this report. All Quality Control criteria were found to be within Method Control Limits unless otherwise noted in the Case Narrative of this report. All results reported are to be considered Wet Weight Results unless dry weight determinations are made and the Case Narrative includes a statement that results are reported on a Dry Weight Basis.

### REPORT QUALIFIERS

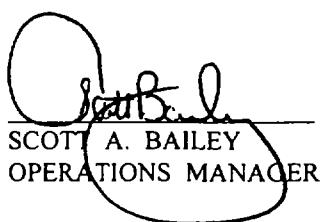
<DL	RESULT IS LESS THAN THE DETECTION LIMIT
DO	PARAMETER WAS DILUTED OUT
fld **	PARAMETER WAS PERFORMED IN THE FIELD
MI	MATRIX INTERFERENCE
NA	NOT APPLICABLE
ND	NOT DETECTED
subc **	ANALYSIS WAS SUBCONTRACTED
TNTC	TOO NUMEROUS TO COUNT
00:00	TIME NOT PROVIDED OR MIDNIGHT
SC	SAMPLE CONC >= 4 TIMES SPIKE CONC

\*\* These fields will appear in the analyst column

### ISO GUIDE 25 DECLARATION

In accordance with ISO Guide 25, this report shall be reproduced only in full, and with the written permission of Gulf Coast Analytical Laboratories, Inc. The results herein relate only to the sample(s) tested. Documented results are shown on the following page(s).

We appreciate this opportunity to provide you with this analytical service. If we can be of further assistance, please do not hesitate to contact us at (225)769-4900.

  
SCOTT A. BAILEY  
OPERATIONS MANAGER

This Report Contains 24 Pages.

**SAMPLE ANALYSIS****SAMPLE IDENTIFICATION**

Sample#	Matrix	Sample ID	Sample Date	Receive Date
2010531016	SOLID	GLUE TANK	05/30/2001 10:30	05/31/2001 09:25

**METHOD SUMMARY**

Test	Method	Prep Date	Analysis Date
Flashpoint	1010M		06/05/2001 09:50
Reactivity Cyanide	7.3.3.2	06/01/2001 08:30	06/02/2001 17:59
Reactivity Sulfide	7.3.4.2	06/01/2001 08:30	06/01/2001 11:00
pH/Extract	9045		06/01/2001 07:00
PCBs (8082)	8082	05/31/2001 13:00	06/07/2001 10:40
TCLP Metals	1311-6010/7000	06/04/2001 13:36	06/06/2001 08:31
TCLP-Semivolatiles(8270C)Solid	TCLP1311-8270C	06/05/2001 13:00	06/06/2001 15:23
TCLP-VOA (8260B) Solid	ZHE 1311-8260B	05/31/2001 17:00	06/02/2001 11:07
TPH-Diesel	8015B-M Diesel	06/04/2001 10:30	06/06/2001 18:10

**ANALYTICAL RESULTS**

Miscellaneous Analyses	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Flashpoint	>212	(DEG F)	50	1	132049	wmp
pH/Extract	4.10	(Units)	1	1	131887	olt
Reactivity Cyanide	<DL	(mg/kg CN)	250	1	131959	klc
Reactivity Sulfide	<DL	(mg/kg S)	80	1	131899	hlo

PCBs (8082)	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Aroclor-1242	<DL	(mg/kg)	0.04	1		tnt
Aroclor-1254	<DL	(mg/kg)	0.04	1		tnt
Aroclor-1221	<DL	(mg/kg)	0.04	1		tnt
Aroclor-1232	<DL	(mg/kg)	0.04	1		tnt
Aroclor-1248	<DL	(mg/kg)	0.04	1		tnt
Aroclor-1260	<DL	(mg/kg)	0.04	1		tnt
Aroclor-1016	<DL	(mg/kg)	0.04	1		tnt
<i>Surrogate(s)</i>	<i>%Recovery</i>		<i>LIMITS</i>			
Tetrachloro-m-xylene	MI		60-150			
Decachlorobiphenyl	MI		60-150			

TCLP Metals	Result (mg/L)	Regulatory Limit	Reporting Limit	Dilution	QC Batch	By
Silver	<DL	5.0	0.05	1	132183	kdg
Arsenic	<DL	5.0	0.2	1	132183	kdg
Barium	<DL	100.0	1	1	132183	kdg
Cadmium	<DL	1.0	0.01	.1	132183	kdg
Chromium	<DL	5.0	0.05	1	132183	kdg

**SAMPLE ANALYSIS**

SAMPLE# 2010531016 CONTINUED

**ANALYTICAL RESULTS**

TCLP Metals	Result (mg/L)	Regulatory Limit	Reporting Limit	Dilution	QC Batch	By
Lead	<DL	5.0	0.1	1	132183	kdg
Selenium	<DL	1.0	0.1	1	132183	kdg
Mercury	<DL	0.200	0.0002	1	132183	kdg

TCLP-Semivolatiles(8270C)Solid	Result (mg/L)	Regulatory Limit	Reporting Limit	Dilution	QC Batch	By
1,4-Dichlorobenzene	<DL	7.5	0.05	1	132135	rlw
2,4-Dinitrotoluene	<DL	0.13	0.05	1	132135	rlw
Hexachlorobenzene	<DL	0.13	0.05	1	132135	rlw
Hexachlorobutadiene	<DL	0.5	0.05	1	132135	rlw
Hexachloroethane	<DL	3.0	0.05	1	132135	rlw
Nitrobenzene	<DL	2.0	0.05	1	132135	rlw
Pyridine	<DL	5.0	0.05	1	132135	rlw
o-Cresol	<DL	200.0	0.05	1	132135	rlw
m & p-Cresol	<DL	200.0	0.05	1	132135	rlw
Cresols	<DL	200.0	0.1	1	132135	rlw
Pentachlorophenol	<DL	100.0	0.05	1	132135	rlw
2,4,5-Trichlorophenol	<DL	400.0	0.05	1	132135	rlw
2,4,6-Trichlorophenol	<DL	2.0	0.05	1	132135	rlw
<i>Surrogate(s)</i>	<i>%Recovery</i>		<i>LIMITS</i>			
Nitrobenzene-d5	93		43-110			
2-Fluorobiphenyl	89		16-128			
Terphenyl-d14	102		47-121			
Phenol-d6	27		10-76			
2-Fluorophenol	38		24-96			
2,4,6-Tribromophenol	84		19-133			

TCLP-VOA (8260B) Solid	Result (mg/L)	Regulatory Limit	Reporting Limit	Dilution	QC Batch	By
Benzene	<DL	0.5	0.2	40	131928	hjl
Carbon tetrachloride	<DL	0.5	0.2	40	131928	hjl
Chlorobenzene	<DL	100.0	0.2	40	131928	hjl
Chloroform	<DL	6.0	0.2	40	131928	hjl
1,2-Dichloroethane	<DL	0.5	0.2	40	131928	hjl
1,1-Dichloroethylene	<DL	0.7	0.2	40	131928	hjl
Methyl ethyl ketone	<DL	200.0	1	40	131928	hjl
Tetrachloroethylene	<DL	0.7	0.2	40	131928	hjl
Trichloroethylene	<DL	0.5	0.2	40	131928	hjl
Vinyl chloride	<DL	0.2	0.2	40	131928	hjl
<i>Surrogate(s)</i>	<i>%Recovery</i>		<i>LIMITS</i>			
1,2-Dichloroethane-d4	112		76-128			
Toluene-d8	108		83-112			
4-Bromofluorobenzene	118**		78-115			
Dibromofluoromethane	103		70-130			

\*\* - Recovery Outside QC Limits

**SAMPLE ANALYSIS**

SAMPLE# 2010531016 CONTINUED

**ANALYTICAL RESULTS**

TPH-Diesel	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Total hydrocarbons (diesel)	<DL	(mg/kg)	20	10		tls
<i>Surrogate(s)</i>	%Recovery		<i>LIMITS</i>			
O-TERPHENYL	DO		60-140			

**SAMPLE ANALYSIS****SAMPLE IDENTIFICATION**

Sample#	Matrix	Sample ID	Sample Date	Receive Date
2010531022	WATER	AG TANK	05/30/2001 15:45	05/31/2001 09:25

**METHOD SUMMARY**

Test	Method	Prep Date	Analysis Date
Mercury	SW7470A	05/31/2001 15:30	06/01/2001 13:59
Metals by EPA Method 6010	6010B	05/31/2001 15:30	06/03/2001 08:54
Flashpoint	1010		06/05/2001 09:50
Reactivity Cyanide	7.3.3.2	06/01/2001 08:30	06/02/2001 17:59
Reactivity Sulfide	7.3.4.2	06/01/2001 08:30	06/01/2001 11:00
pH	4500 H+B		05/31/2001 14:20
PCBs (8082)	8082	06/01/2001 07:30	06/06/2001 19:43
Semivolatiles (8270C) Water	8270C	05/31/2001 12:30	06/04/2001 20:30
TPH-Diesel	8015B-M Diesel	06/01/2001 07:30	06/06/2001 19:51
Volatiles (8260B) Water	8260B		06/04/2001 16:43

**ANALYTICAL RESULTS**

Metals Analyses	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Mercury	<DL	(mg/L Hg)	0.0002	1	131920	rea

Miscellaneous Analyses	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Flashpoint	>212	(DEG F)	50	1	132048	wmp
pH	7.62	(Units)	2	1	131851	olt
Reactivity Cyanide	<DL	(mg/L CN)	250	1	131960	klc
Reactivity Sulfide	<DL	(mg/L S)	80	1	131900	hlo

Metals by EPA Method 6010	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Silver	<DL	(mg/L)	0.01	1	131940	rea
Arsenic	<DL	(mg/L)	0.04	1	131940	rea
Barium	0.152	(mg/L)	0.01	1	131940	rea
Cadmium	<DL	(mg/L)	0.005	1	131940	rea
Chromium	<DL	(mg/L)	0.01	1	131940	rea
Lead	<DL	(mg/L)	0.015	1	131940	rea
Selenium	<DL	(mg/L)	0.04	1	131940	rea

PCBs (8082)	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Aroclor-1242	<DL	(ug/L)	1	1		tnt
Aroclor-1254	<DL	(ug/L)	1	1		tnt

**SAMPLE ANALYSIS**

SAMPLE# 2010531022 CONTINUED

**ANALYTICAL RESULTS**

PCBs (8082)	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Aroclor-1221	<DL	(ug/L)	1	1		tnt
Aroclor-1232	<DL	(ug/L)	1	1		tnt
Aroclor-1248	<DL	(ug/L)	1	1		tnt
Aroclor-1260	<DL	(ug/L)	1	1		tnt
Aroclor-1016	<DL	(ug/L)	1	1		tnt
<i>Surrogate(s)</i>	<i>%Recovery</i>		<b>LIMITS</b>			
Tetrachloro-m-xylene	70		60-150			
Decachlorobiphenyl	80		60-150			

Semivolatiles (8270C)Water	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Acenaphthene	<DL	(ug/L)	10	1	132035	rlw
Acenaphthylene	<DL	(ug/L)	10	1	132035	rlw
Anthracene	<DL	(ug/L)	10	1	132035	rlw
Benzidine	<DL	(ug/L)	40	1	132035	rlw
Benzo(a)anthracene	<DL	(ug/L)	10	1	132035	rlw
Benzo(a)pyrene	<DL	(ug/L)	10	1	132035	rlw
Benzo(b)fluoranthene	<DL	(ug/L)	10	1	132035	rlw
Benzo(ghi)perylene	<DL	(ug/L)	10	1	132035	rlw
Benzo(k)fluoranthene	<DL	(ug/L)	10	1	132035	rlw
bis(2-Chloroethoxy)methane	<DL	(ug/L)	10	1	132035	rlw
bis(2-Chloroethyl)ether	<DL	(ug/L)	10	1	132035	rlw
bis(2-Chloroisopropyl)ether	<DL	(ug/L)	10	1	132035	rlw
bis(2-Ethylhexyl)phthalate	<DL	(ug/L)	10	1	132035	rlw
4-Bromophenyl-phenylether	<DL	(ug/L)	10	1	132035	rlw
Butylbenzylphthalate	<DL	(ug/L)	10	1	132035	rlw
2-Chloronaphthalene	<DL	(ug/L)	10	1	132035	rlw
4-Chlorophenyl-phenylether	<DL	(ug/L)	10	1	132035	rlw
Chrysene	<DL	(ug/L)	10	1	132035	rlw
Dibenzo(a,h)anthracene	<DL	(ug/L)	10	1	132035	rlw
1,2-Dichlorobenzene	<DL	(ug/L)	10	1	132035	rlw
1,3-Dichlorobenzene	<DL	(ug/L)	10	1	132035	rlw
1,4-Dichlorobenzene	<DL	(ug/L)	10	1	132035	rlw
3,3-Dichlorobenzidine	<DL	(ug/L)	20	1	132035	rlw
Diethylphthalate	<DL	(ug/L)	10	1	132035	rlw
Dimethylphthalate	<DL	(ug/L)	10	1	132035	rlw
Di-n-butylphthalate	<DL	(ug/L)	10	1	132035	rlw
2,4-Dinitrotoluene	<DL	(ug/L)	10	1	132035	rlw
2,6-Dinitrotoluene	<DL	(ug/L)	10	1	132035	rlw
Di-n-octyl phthalate	<DL	(ug/L)	10	1	132035	rlw
1,2-Diphenylhydrazine (Note)	<DL	(ug/L)	10	1	132035	rlw
Fluoranthene	<DL	(ug/L)	10	1	132035	rlw
Fluorene	<DL	(ug/L)	10	1	132035	rlw
Hexachlorobenzene	<DL	(ug/L)	10	1	132035	rlw
Hexachlorobutadiene	<DL	(ug/L)	10	1	132035	rlw

Note: 1,2-Diphenylhydrazine as Azobenzene

**SAMPLE ANALYSIS**

SAMPLE# 2010531022 CONTINUED

**ANALYTICAL RESULTS**

Semivolatiles (8270C) Water	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Hexachlorocyclopentadiene	<DL	(ug/L)	10	1	132035	rlw
Hexachloroethane	<DL	(ug/L)	10	1	132035	rlw
Indeno(1,2,3-cd)pyrene	<DL	(ug/L)	10	1	132035	rlw
Isophorone	<DL	(ug/L)	10	1	132035	rlw
Naphthalene	<DL	(ug/L)	10	1	132035	rlw
Nitrobenzene	<DL	(ug/L)	10	1	132035	rlw
N-Nitrosodimethylamine	<DL	(ug/L)	10	1	132035	rlw
N-Nitroso-di-n-propylamine	<DL	(ug/L)	10	1	132035	rlw
N-Nitrosodiphenylamine (Note)	<DL	(ug/L)	10	1	132035	rlw
Phenanthrene	<DL	(ug/L)	10	1	132035	rlw
Pyrene	<DL	(ug/L)	10	1	132035	rlw
1,2,4-Trichlorobenzene	<DL	(ug/L)	10	1	132035	rlw
2-Methylnaphthalene	<DL	(ug/L)	10	1	132035	rlw
2-Chlorophenol	<DL	(ug/L)	10	1	132035	rlw
2,4-Dichlorophenol	<DL	(ug/L)	10	1	132035	rlw
2,4-Dimethylphenol	<DL	(ug/L)	10	1	132035	rlw
4,6-Dinitro-o-Cresol	<DL	(ug/L)	50	1	132035	rlw
2,4-Dinitrophenol	<DL	(ug/L)	50	1	132035	rlw
2-Nitrophenol	<DL	(ug/L)	10	1	132035	rlw
4-Nitrophenol	<DL	(ug/L)	50	1	132035	rlw
4-Chloro-3-Methylphenol	<DL	(ug/L)	10	1	132035	rlw
Pentachlorophenol	<DL	(ug/L)	50	1	132035	rlw
Phenol	<DL	(ug/L)	10	1	132035	rlw
2,4,6-Trichlorophenol	<DL	(ug/L)	10	1	132035	rlw
<i>Surrogate(s)</i>	%Recovery		LIMITS			
Nitrobenzene-d5	91		43-110			
2-Fluorobiphenyl	89		16-128			
Terphenyl-d14	70		47-121			
Phenol-d6	37		10-76			
2-Fluorophenol	52		24-96			
2,4,6-Tribromophenol	84		19-133			

Note: N-Nitrosodiphenylamine decomposes in the GC inlet and cannot be separated from Diphenylamine

TPH-Diesel	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Total hydrocarbons (diesel)	<DL	(ug/L)	200			tls
<i>Surrogate(s)</i>	%Recovery		LIMITS			
O-TERPHENYL	88		60-140			

Volatiles (8260B) Water	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Acrylonitrile	<DL	(ug/L)	25	1	131983	rsp
Benzene	<DL	(ug/L)	5	1	131983	rsp
Bromoform	<DL	(ug/L)	5	1	131983	rsp
Carbon tetrachloride	<DL	(ug/L)	5	1	131983	rsp

**SAMPLE ANALYSIS**

SAMPLE# 2010531022 CONTINUED

**ANALYTICAL RESULTS**

Volatiles (8260B) Water	Result	Unit	Reporting Limit	Dilution	QC Batch	By
Chlorobenzene	<DL	(ug/L)	5	1	131983	rsp
Chlorodibromomethane	<DL	(ug/L)	5	1	131983	rsp
Chloroethane	<DL	(ug/L)	5	1	131983	rsp
Chloroform	<DL	(ug/L)	5	1	131983	rsp
Dichlorobromomethane	<DL	(ug/L)	5	1	131983	rsp
1,1-Dichloroethane	<DL	(ug/L)	5	1	131983	rsp
1,2-Dichloroethane	<DL	(ug/L)	5	1	131983	rsp
1,1-Dichloroethylene	<DL	(ug/L)	5	1	131983	rsp
1,2-Dichloropropane	<DL	(ug/L)	5	1	131983	rsp
cis-1,3-Dichloropropene	<DL	(ug/L)	5	1	131983	rsp
Ethylbenzene	<DL	(ug/L)	5	1	131983	rsp
Bromomethane	<DL	(ug/L)	5	1	131983	rsp
Chloromethane	<DL	(ug/L)	5	1	131983	rsp
Methylene chloride	<DL	(ug/L)	10	1	131983	rsp
1,1,2,2-Tetrachloroethane	<DL	(ug/L)	5	1	131983	rsp
Tetrachloroethylene	<DL	(ug/L)	5	1	131983	rsp
Toluene	<DL	(ug/L)	5	1	131983	rsp
1,1,1-Trichloroethane	<DL	(ug/L)	5	1	131983	rsp
1,1,2-Trichloroethane	<DL	(ug/L)	5	1	131983	rsp
Trichloroethene	<DL	(ug/L)	5	1	131983	rsp
Trichlorofluoromethane	<DL	(ug/L)	5	1	131983	rsp
Vinyl chloride	<DL	(ug/L)	5	1	131983	rsp
Styrene	<DL	(ug/L)	5	1	131983	rsp
Total Xylene	<DL	(ug/L)	10	1	131983	rsp
trans-1,3-Dichloropropene	<DL	(ug/L)	5	1	131983	rsp
1,2-Dichlorobenzene	<DL	(ug/L)	5	1	131983	rsp
1,3-Dichlorobenzene	<DL	(ug/L)	5	1	131983	rsp
1,4-Dichlorobenzene	<DL	(ug/L)	5	1	131983	rsp
trans-1,2-Dichloroethene	<DL	(ug/L)	5	1	131983	rsp
Carbon disulfide	<DL	(ug/L)	5	1	131983	rsp
Methyl ethyl ketone	<DL	(ug/L)	25	1	131983	rsp
1,1,1,2-Tetrachloroethane	<DL	(ug/L)	5	1	131983	rsp
Acetone	<DL	(ug/L)	25	1	131983	rsp
Vinyl Acetate	<DL	(ug/L)	5	1	131983	rsp
2-Hexanone	<DL	(ug/L)	5	1	131983	rsp
4-Methyl-2-pentanone	<DL	(ug/L)	5	1	131983	rsp
Ethylene Dibromide	<DL	(ug/L)	5	1	131983	rsp
1,2-Dibromo-3-chloropropane	<DL	(ug/L)	5	1	131983	rsp
trans-1,4-Dichloro-2-butene	<DL	(ug/L)	5	1	131983	rsp
Methylene bromide	<DL	(ug/L)	5	1	131983	rsp
Methyl iodide	<DL	(ug/L)	5	1	131983	rsp
1,2,3-Trichloropropane	<DL	(ug/L)	5	1	131983	rsp
Bromochloromethane	<DL	(ug/L)	5	1	131983	rsp
cis-1,2-Dichloroethene	<DL	(ug/L)	5	1	131983	rsp
<i>Surrogate(s)</i>	%Recovery		LIMITS			
1,2-Dichloroethane-d4	93		76-128			
Toluene-d8	101		83-112			

**SAMPLE ANALYSIS**

SAMPLE# 2010531022 CONTINUED

**ANALYTICAL RESULTS**

Volatiles (8260B) Water	Result	Unit	Reporting Limit	Dilution	QC Batch	By
4-Bromofluorobenzene	103		78-115			
Dibromofluoromethane	104		70-130			

# QUALITY CONTROL SUMMARY

Report #: 20013385

Parameter	Units	METHOD BLANK		LABORATORY CONTROL STANDARD			DUPLICATE			SPIKE		
		Reporting Result	Spiked Limit	Amount	Percent Recovery	QC Limits	Result 1	Result 2	RPD	Spiked Amount	Percent Recovery	QC Limits
QC Batch 131851 pH	(Units)			5.00	101	99 - 101	7.53	7.55	0			
QC Batch 131887 pH/Extract	(Units)			8.0	100	99 - 101	10.60	10.63	0			
QC Batch 131899 Reactivity Sulfide	(mg/kg S)	<DL	80	906	109	20 - 120	<DL	<DL				
QC Batch 131900 Reactivity Sulfide	(mg/L S)	<DL	80	906	109	20 - 120	<DL	<DL				
QC Batch 131920 Mercury	(mg/L Hg)	<DL	0.0002	0.00500	104	79 - 120	<DL	<DL		0.00500	104	74 - 125
QC Batch 131928 Benzene	(mg/L)	<DL	0.005	0.05	101	74 - 128						
Carbon tetrachloride	(mg/L)	<DL	0.005									
Chlorobenzene	(mg/L)	<DL	0.005	0.05	101	78 - 125						
Chloroform	(mg/L)	<DL	0.005									
1,2-Dichloroethane	(mg/L)	<DL	0.005									
1,1-Dichloroethylene	(mg/L)	<DL	0.005	0.05	91	67 - 140						
Tetrachloroethylene	(mg/L)	<DL	0.005									
Trichloroethylene	(mg/L)	<DL	0.005	0.05	85	63 - 118						
Vinyl chloride	(mg/L)	<DL	0.005									
Methyl ethyl ketone	(mg/L)	<DL	0.025									
QC Batch 131940 Silver	(mg/L)	<DL	0.01	0.250	104	79 - 120	<DL	<DL		0.250	111	74 - 125
Arsenic	(mg/L)	<DL	0.04	2.50	100	79 - 120	<DL	<DL		2.50	102	74 - 125
Barium	(mg/L)	<DL	0.01	10.0	95	79 - 120	0.122	0.176	36 *	10.0	93	74 - 125
Cadmium	(mg/L)	<DL	0.005	0.250	94	79 - 120	<DL	<DL		0.250	89	74 - 125
Chromium	(mg/L)	<DL	0.01	1.00	95	79 - 120	<DL	0.017		1.00	96	74 - 125

\*Outside QC Limits - See Narrative

# QUALITY CONTROL SUMMARY

Report #: 20013385

Parameter	Units	METHOD BLANK		LABORATORY CONTROL STANDARD			DUPLICATE			SPIKE		
		Reporting Result	Limit	Spiked Amount	Percent Recovery	QC Limits	Result 1	Result 2	RPD	Spiked Amount	Percent Recovery	QC Limits
Lead	(mg/L)	<DL	0.015	2.50	92	79 - 120	0.017	0.018	6	2.50	88	74 - 125
Selenium	(mg/L)	<DL	0.04	2.50	104	79 - 120	<DL	<DL		2.50	103	74 - 125
QC Batch 131959												
Reactivity Cyanide	(mg/kg CN)	<DL	250				<DL	<DL				
QC Batch 131960												
Reactivity Cyanide	(mg/L CN)	<DL	250				<DL	<DL				
QC Batch 131983												
Acrylonitrile	(ug/L)	<DL	25									
Benzene	(ug/L)	<DL	5	50	105	74 - 128						
Bromoform	(ug/L)	<DL	5									
Carbon tetrachloride	(ug/L)	<DL	5									
Chlorobenzene	(ug/L)	<DL	5	50	109	78 - 125						
Chlorodibromomethane	(ug/L)	<DL	5									
Chloroethane	(ug/L)	<DL	5									
Chloroform	(ug/L)	<DL	5									
Dichlorobromomethane	(ug/L)	<DL	5									
1,1-Dichloroethane	(ug/L)	<DL	5									
1,2-Dichloroethane	(ug/L)	<DL	5									
1,1-Dichloroethylene	(ug/L)	<DL	5	50	102	67 - 140						
1,2-Dichloropropane	(ug/L)	<DL	5									
Ethylbenzene	(ug/L)	<DL	5									
Bromomethane	(ug/L)	<DL	5									
Chloromethane	(ug/L)	<DL	5									
Methylene chloride	(ug/L)	<DL	10									
1,1,2,2-Tetrachloroethane	(ug/L)	<DL	5									
Tetrachloroethylene	(ug/L)	<DL	5									
Toluene	(ug/L)	<DL	5	50	110	76 - 125						
1,1,1-Trichloroethane	(ug/L)	<DL	5									
1,1,2-Trichloroethane	(ug/L)	<DL	5									
Trichloroethene	(ug/L)	<DL	5	50	94	63 - 118						
Trichlorofluoromethane	(ug/L)	<DL	5									

# QUALITY CONTROL SUMMARY

Report #: 20013385

Parameter	Units	METHOD BLANK		LABORATORY CONTROL STANDARD			DUPLICATE			SPIKE		
		Reporting Result	Limit	Spiked Amount	Percent Recovery	QC Limits	Result 1	Result 2	RPD	Spiked Amount	Percent Recovery	QC Limits
Vinyl chloride	(ug/L)	<DL	5									
Styrene	(ug/L)	<DL	5									
Total Xylene	(ug/L)	<DL	10									
trans-1,3-Dichloropropene	(ug/L)	<DL	5									
1,2-Dichlorobenzene	(ug/L)	<DL	5									
1,4-Dichlorobenzene	(ug/L)	<DL	5									
1,3-Dichlorobenzene	(ug/L)	<DL	5									
trans-1,2-Dichloroethene	(ug/L)	<DL	5									
Carbon disulfide	(ug/L)	<DL	5									
Methyl ethyl ketone	(ug/L)	<DL	25									
1,1,1,2-Tetrachloroethane	(ug/L)	<DL	5									
Acetone	(ug/L)	<DL	25									
Vinyl Acetate	(ug/L)	<DL	5									
2-Hexanone	(ug/L)	<DL	5									
4-Methyl-2-pentanone	(ug/L)	<DL	5									
1,2-Dibromo-3-chloropropane	(ug/L)	<DL	5									
Ethylene Dibromide	(ug/L)	<DL	5									
trans-1,4-Dichloro-2-butene	(ug/L)	<DL	5									
Methylene bromide	(ug/L)	<DL	5									
Methyl iodide	(ug/L)	<DL	5									
1,2,3-Trichloropropane	(ug/L)	<DL	5									
cis-1,3-Dichloropropene	(ug/L)	<DL	5									
Bromochloromethane	(ug/L)	<DL	5									
cis-1,2-Dichloroethene	(ug/L)	<DL	5									
<b>QC Batch 132035</b>												
2-Chlorophenol	(ug/L)	<DL	10	200	68	38 - 90						
Acenaphthene	(ug/L)	<DL	10	100	84	58 - 98						
2,4-Dichlorophenol	(ug/L)	<DL	10									
Acenaphthylene	(ug/L)	<DL	10									
2,4-Dimethylphenol	(ug/L)	<DL	10									
Anthracene	(ug/L)	<DL	10									
4,6-Dinitro-o-Cresol	(ug/L)	<DL	50									
Benzidine	(ug/L)	<DL	40									

# QUALITY CONTROL SUMMARY

Report #: 20013385

Parameter	Units	METHOD BLANK		LABORATORY CONTROL STANDARD			DUPLICATE			SPIKE		
		Reporting Result	Limit	Spiked Amount	Percent Recovery	QC Limits	Result 1	Result 2	RPD	Spiked Amount	Percent Recovery	QC Limits
2,4-Dinitrophenol	(ug/L)	<DL	50									
Benzo(a)anthracene	(ug/L)	<DL	10									
2-Nitrophenol	(ug/L)	<DL	10									
Benzo(a)pyrene	(ug/L)	<DL	10									
4-Nitrophenol	(ug/L)	<DL	50	200	23	8 - 62						
Benzo(b)fluoranthene	(ug/L)	<DL	10	200	71	45 - 98						
4-Chloro-3-Methylphenol	(ug/L)	<DL	10	200	80	32 - 132						
Benzo(ghi)perylene	(ug/L)	<DL	10	200	28	8 - 53						
Pentachlorophenol	(ug/L)	<DL	50									
Benzo(k)fluoranthene	(ug/L)	<DL	10									
Phenol	(ug/L)	<DL	10									
bis(2-Chloroethoxy)methane	(ug/L)	<DL	10									
2,4,6-Trichlorophenol	(ug/L)	<DL	10									
bis(2-Chloroethyl)ether	(ug/L)	<DL	10									
bis(2-Chloroisopropyl)ether	(ug/L)	<DL	10									
bis(2-Ethylhexyl)phthalate	(ug/L)	<DL	10									
4-Bromophenyl-phenylether	(ug/L)	<DL	10									
Butylbenzylphthalate	(ug/L)	<DL	10									
2-Chloronaphthalene	(ug/L)	<DL	10									
4-Chlorophenyl-phenylether	(ug/L)	<DL	10									
Chrysene	(ug/L)	<DL	10									
Dibenzo(a,h)anthracene	(ug/L)	<DL	10									
1,2-Dichlorobenzene	(ug/L)	<DL	10									
1,3-Dichlorobenzene	(ug/L)	<DL	10									
1,4-Dichlorobenzene	(ug/L)	<DL	10	100	71	46 - 93						
3,3-Dichlorobenzidine	(ug/L)	<DL	20									
Diethylphthalate	(ug/L)	<DL	10									
Dimethylphthalate	(ug/L)	<DL	10									
Di-n-butylphthalate	(ug/L)	<DL	10									
2,4-Dinitrotoluene	(ug/L)	<DL	10	100	97	67 - 123						
2,6-Dinitrotoluene	(ug/L)	<DL	10									
Di-n-octyl phthalate	(ug/L)	<DL	10									
1,2-Diphenylhydrazine *	(ug/L)	<DL	10									
Fluoranthene	(ug/L)	<DL	10									

# QUALITY CONTROL SUMMARY

Report#: 20013385

Parameter	Units	METHOD BLANK		LABORATORY CONTROL STANDARD			DUPLICATE			SPIKE		
		Reporting Result	Limit	Spiked Amount	Percent Recovery	QC Limits	Result 1	Result 2	RPD	Spiked Amount	Percent Recovery	QC Limits
Fluorene	(ug/L)	<DL	10									
Hexachlorobenzene	(ug/L)	<DL	10									
Hexachlorobutadiene	(ug/L)	<DL	10									
Hexachlorocyclopentadiene	(ug/L)	<DL	10									
Hexachloroethane	(ug/L)	<DL	10									
Indeno(1,2,3-cd)pyrene	(ug/L)	<DL	10									
Isophorone	(ug/L)	<DL	10									
Naphthalene	(ug/L)	<DL	10									
Nitrobenzene	(ug/L)	<DL	10									
N-Nitrosodimethylamine	(ug/L)	<DL	10									
N-Nitroso-di-n-propylamine	(ug/L)	<DL	10	100	91	55 - 102						
N-Nitrosodiphenylamine **	(ug/L)	<DL	10									
Phenanthrene	(ug/L)	<DL	10									
Pyrene	(ug/L)	<DL	10	100	104	44 - 114						
1,2,4-Trichlorobenzene	(ug/L)	<DL	10	100	77	53 - 113						
2-Methylnaphthalene	(ug/L)	<DL	10									
QC Batch 132048												
Flashpoint	(DEG F)			81	102	97 - 102	>212	>212				
QC Batch 132049												
Flashpoint	(DEG F)			81	102	97 - 102	>212	>212				
QC Batch 132135												
Pentachlorophenol	(mg/L)	<DL	0.05	0.2	85	31 - 128						
2,4,6-Trichlorophenol	(mg/L)	<DL	0.05									
2,4,5-Trichlorophenol	(mg/L)	<DL	0.05									
o-Cresol	(mg/L)	<DL	0.05									
Cresols	(mg/L)	<DL	0.1									
1,4-Dichlorobenzene	(mg/L)	<DL	0.05	0.1	73	40 - 122						
m & p-Cresol	(mg/L)	<DL	0.05									
2,4-Dinitrotoluene	(mg/L)	<DL	0.05	0.1	86	60 - 124						
Hexachlorobenzene	(mg/L)	<DL	0.05									
Hexachlorobutadiene	(mg/L)	<DL	0.05									

# QUALITY CONTROL SUMMARY

Report #: 20013385

Parameter	Units	METHOD BLANK		LABORATORY CONTROL STANDARD			DUPLICATE			SPIKE		
		Reporting Result	Limit	Spiked Amount	Percent Recovery	QC Limits	Result 1	Result 2	RPD	Spiked Amount	Percent Recovery	QC Limits
Hexachloroethane	(mg/L)	<DL	0.05									
Nitrobenzene	(mg/L)	<DL	0.05									
Pyridine	(mg/L)	<DL	0.05									
<b>QC Batch 132183</b>												
Silver	(mg/L)	<DL	0.05	0.250	102	79 - 120				0.250	110	74 - 125
Arsenic	(mg/L)	<DL	0.2	2.50	92	79 - 120				2.50	96	74 - 125
Barium	(mg/L)	<DL	1	10.0	88	79 - 120				10.0	99	74 - 125
Cadmium	(mg/L)	<DL	0.01	0.250	84	79 - 120				0.250	86	74 - 125
Chromium	(mg/L)	<DL	0.05	1.00	90	79 - 120				1.00	96	74 - 125
Mercury	(mg/L)	<DL	0.0002	0.00500	100	79 - 120				0.00500	109	74 - 125
Lead	(mg/L)	<DL	0.1	2.50	80	79 - 120				2.50	89	74 - 125
Selenium	(mg/L)	<DL	0.1	2.50	103	79 - 120				2.50	107	74 - 125

MATRIX SPIKE REPORT

Fraction : QC Reference List 8260

Method : 8260

Matrix : WATER

Quality Control Batch: 131983

Sample No: 2010531066

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS %	REC#	ADVISORY LIMITS REC
1,1-Dichloroethylene	50	<5	54.5	109		61-145
Benzene	50	<5	55.7	111		76-127
Trichloroethene	50	24.9	88.3	127*		71-120
Toluene	50	<5	59.4	119		76-125
Chlorobenzene	50	<5	62.6	125		75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD %	%	ADVISORY LIMITS
			REC#	RPD#	RPD REC
1,1-Dichloroethylene	50	54.2	108	1	14 61-145
Benzene	50	54.4	109	2	11 76-127
Trichloroethene	50	81.4	113	12	14 71-120
Toluene	50	58.2	116	2	13 76-125
Chlorobenzene	50	60.5	121	3	13 75-130

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 1 out of 10 outside limits

## WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name:

Contract:

Lab Code:

Case No.: 20013369 SAS No.:

SDG No.: 20013369

Matrix Spike - EPA Sample No.: OUTFALL 101A

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,1-Dichloroethene +	50.0	0.00	50.1	100	61-145
Benzene	50.0	0.00	46.7	93	76-127
Trichloroethene	50.0	0.00	39.2	78	71-120
Toluene +	50.0	0.00	46.7	93	76-125
Chlorobenzene ++	50.0	0.00	42.9	86	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
1,1-Dichloroethene +	50.0	53.3	107	7	14	61-145
Benzene	50.0	48.6	97	4	11	76-127
Trichloroethene	50.0	42.5	85	8	14	71-120
Toluene +	50.0	49.6	99	6	13	76-125
Chlorobenzene ++	50.0	43.9	88	2	13	75-130

# Column to be used to flag recovery and RPD values with an asterisk

\* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: OW826-196

FORM 3  
WATER SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name:

Contract:

Lab Code:

Case No.: SVW1541 SAS No.:

SDG No.: SVW1541

Matrix Spike - BLK Sample No.: 0531SBLK01

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Phenol +	200	0.00	56.3	28	8- 53
2-Chlorophenol	200	0.00	136	68	38- 90
1,4-Dichlorobenzene +	100	0.00	71.3	71	46- 93
N-Nitroso-di-n-propylam	100	0.00	90.6	91	55-102
1,2,4-Trichlorobenzene	100	0.00	76.6	77	53- 95
4-Chloro-3-Methylphenol	200	0.00	142	71	45- 98
Acenaphthene +	100	0.00	83.8	84	58- 98
4-Nitrophenol ++	200	0.00	46.0	23	8- 62
2,4-Dinitrotoluene	100	0.00	96.9	97	67-123
Pentachlorophenol +	200	0.00	161	80	32-132
Pyrene	100	0.00	104	104	44-114

# Column to be used to flag recovery and RPD values with an asterisk  
 \* Values outside of QC limits

RPD: 0 out of 0 outside limits

Spike Recovery: 0 out of 11 outside limits

COMMENTS: SVW-1541 In the Semivolatile analysis, the laboratory control sample was used because there was insufficient sample for an MS/MSD.

3C  
WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Contract:

Lab Code: Case No.: SVW1549 SAS No.: SDG No.: SVW1549

Matrix Spike - EPA Sample No.: 2010604048

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Phenol +	200	0.00	52.5	26	10-114
2-Chlorophenol	200	0.00	133	66	40-120
1,4-Dichlorobenzene +	100	0.00	77.6	78	44-143
N-Nitroso-di-n-propylam	100	0.00	79.6	80	54-111
1,2,4-Trichlorobenzene	100	0.00	83.6	84	50- 96
4-Chloro-3-Methylphenol	200	0.00	147	74	54-114
Acenaphthene +	100	0.00	83.6	84	56-126
4-Nitrophenol ++	200	0.00	56.1	28	10-110
2,4-Dinitrotoluene	100	0.00	88.0	88	61-106
Pentachlorophenol +	200	0.00	168	84	37-125
Pyrene	100	0.00	91.7	92	40-119

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	REC.
Phenol +	200	51.1	26	0	40	10-114
2-Chlorophenol	200	124	62	6	24	40-120
1,4-Dichlorobenzene +	100	70.4	70	11	40	44-143
N-Nitroso-di-n-propylam	100	74.1	74	8	40	54-111
1,2,4-Trichlorobenzene	100	75.1	75	11	31	50- 96
4-Chloro-3-Methylphenol	200	138	69	7	40	54-114
Acenaphthene +	100	74.9	75	11	40	56-126
4-Nitrophenol ++	200	52.1	26	7	40	10-110
2,4-Dinitrotoluene	100	76.7	77	13	33	61-106
Pentachlorophenol +	200	137	68	21	40	37-125
Pyrene	100	82.5	82	11	30	40-119

# Column to be used to flag recovery and RPD values with an asterisk  
 \* Values outside of QC limits

RPD: 0 out of 11 outside limits  
 Spike Recovery: 0 out of 22 outside limits

COMMENTS: SVW-1549

